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ABSTRACT

Operations and activities of the National and Historic Parks Branch, the Canadian Wildlife Service, and 3 development branches of the Canadian government are discussed. Functions of the Indian-Eskimo Development Branch include the administration of statutory responsibilities concerning reserve and surrendered lands, operation of resource and industrial development programs, and assistance to native people in establishment of small businesses. The Northern Economic Development Branch is responsible for effective management of mineral and land resources and for developing the economy of the Yukon Territory and Northwest Territories, stressing extensive participation of native Indians. Program development in northern education, welfare, and engineering has been a major thrust of the Northern Administration Branch. Educational statistics are presented showing enrollment and classification of pupils by district and by pupil residence facility, growth in elementary and secondary enrollment, and growth in vocational education offerings. A section on administrative organization and operations of the Department of Indian Affairs and Northern Development concludes the report. (JH)

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ANNUAL REPORT

Fiscal Year 1968-1969

Department of Indian Affairs and Northern Development

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CONSERVATION

NATIONAL AND HISTORIC PARKS BRANCH

National Parks Service

Operations - The national parks system, encompassing 19 national parks across the country, contains outstanding examples of the natural landscape of Canada. The number of visitors to these parks has been increasing for many years, and the trend is expected to continue owing to population increases, real income increases, more leisure time, and improved travel facilities.

During the fiscal year, the number of visitors increased by 937, 410, or 8. 6 per cent, to 11, 855, 579. Four national parks, Prince Edward Island, Georgian Bay Islands, Jasper, and Fundy, contributed 882, 000 to the increase.

Kejimkujik National Park, in southwestern Nova Scotia, which has been undergoing development since 1965, was scheduled for an official opening early in August 1969. Initial attendance figures indicated that this park will also be very popular in the years to come.

Comparative statistics of national parks attendance are presented in tabular form on page 8.

New campsites, totalling 1, 855, were completed for public use for the 1969 visitor season. Major campground expansions in Banff and Jasper National Parks accounted for 1, 377 out of the total number of new campsites.

Resource Management - The national parks continued their program of promoting buffalo ranching in Canada, by the sale of 165 live buffalo in the autumn of 1968. The animals became available as a result of wildlife management studies, which recommended a reduction of the herd at Elk Island National Park. Necessary reductions in the moose and elk populations in the same park were also carried out, after which meat and hides were distributed to various Indian Bands.

Woodland caribou which had been wiped out on Cape Breton Island by the early 1920's were re-introduced in Cape Breton Highlands National Park in March 1968, when 18 caribou, captured in Laurentides Provincial Park, Quebec, were set free on the highland barrens. In March 1969, another 32 caribou were transferred to the park. Several calves have been sighted and it is believed that there is now a good chance of this species re-establishing itself in this park.

In July 1968, a fire on the border of Banff and Kootenay National Parks burned an area of 6,000 acres. A long-term interpretive program has been developed, which explains to park visitors the circumstances in which the fire occurred and the sequence of events necessary for natural recovery of the area.

Infestations of forest insects and diseases occurred in several national parks. Control measures to reduce damage from a spruce budworm infestation were taken in the Chignecto Campground area of Fundy National Park. In Banff and Jasper National Parks, trees infested with dwarf mistletoe were removed.

Interpretation - Park interpretation is designed not only to increase the visitor's awareness, understanding and appreciation of the parks' environments, but to help him assess his own natural surroundings and his place in them. This is done through conducted field outings, slide-illustrated talks, films, special self-interpretive trails, on-site exhibits, and interpretation centres. In 14 of the 19 national parks, 17 permanent park naturalists and 33 seasonal naturalists served a total of 750,847 visitors, an increase of 21 per cent over the previous year.

The interpretive program in several parks included specially conducted tours for groups of school children, and this part of the program will be expanded in succeeding years.

In June, the renovated museum in Riding Mountain National Park was opened as a new interpretation centre with an entirely new presentation of exhibits and interior design. More than 34,000 people visited the park during the 81-day period that it was open to the public.

Planning, designing and arranging for construction of a number of on-site exhibits and information interpretation exhibit trailers continued throughout the fiscal year so as to make them ready for on-site use during the 1969 summer season at Banff, Kootenay, Waterton Lakes, Elk Island, Fundy, Prince Edward Island, Kejimkujik, Cape Breton Highlands and Terra Nova National Parks.

During the year, 139 permits were issued, under strict control, for the collection of geological, botanical and zoological specimens in national parks for justified scientific purposes: this figure represents a decrease of 24 per cent compared to the previous year.

Lands - Eighty-three new leases and 10 licences of occupation were issued, and 48 leases were transferred. Five leasehold and 23 freehold properties were acquired by the Crown in accordance with the land acquisition program.

A total of 262 new motel units were constructed in Banff and Jasper National Parks.

Park System Planning - Discussions and negotiations on the subject of proposed national parks were continued with the Governments of British Columbia, Manitoba, Quebec, New Brunswick, Nova Scotia, Newfoundland, and the Yukon. A reconnaissance of the proposed national park area near Gaspé, P. Q., and an aerial survey of the Great Slave Lake area of the Northwest Territories were carried out. A national park proposal on the latter area was presented for comment at the January 1969 session of the Northwest Territories Council.

Agreements were in the process of being consummated for the establishment of the Kouchibouguac (New Brunswick), Long Beach (British Columbia), and Gaspé (Quebec) areas as new national parks.

Master Planning - The provisional master plan program, which began in 1967, was completed. Field studies and preliminary work for the expansion of three national parks were also concluded.

Field work was conducted and planning concepts were developed for proposed national parks in Newfoundland, Québec and New Brunswick.

A program to conduct public hearings on the provisional master plans was initiated.

A wide range of studies for boundary revisions, road circulation or park facilities was conducted in most of the parks.

Townsite and Regional Planning - Attendance at national parks continued to put a heavy pressure on the main visitor service centres.

A consultant study of public demand for retail and service outlets provided valuable data for the updating of the townsite development plans for Banff and Jasper, both of which are underway.

Consultants also prepared a development plan for Wasagaming in Riding Mountain National Park, and a further plan was in the process of preparation for Waterton. In all cases, the objective is land-use efficiency within the visitor service centres.

Liaison with the provincial governments in the field of regional planning is becoming increasingly important to encourage the proper use of land adjoining national parks, and to promote the development of visitor services adjacent to the parks. A number of meetings were held during the course of the year to discuss particular problems.

Canadian Outdoor Recreation Demand Study - This joint federal-provincial project, which is being co-ordinated by the Planning Division, is an in-depth examination of the characteristics of the park visitor. Substantial progress was made in the gathering of data. Visitor studies were conducted in all parks in the Atlantic Region of the Branch, and in Point Pelee National Park.

A nationwide inventory of outdoor recreation facilities was started and is being administered through the Recreation Sector of the Canada Land Inventory (ARDA). In the data-gathering phase of a joint National Parks - Canadian Government Travel Bureau survey, some 9,600 Americans were interviewed as they returned to the United States from visits to Canada. A national household survey was conducted to gather data on Canadian parti-

cipation in the various fields of outdoor recreation. Publication of the resulting studies is under consideration.

The Department entered into a contract with a consultant to investigate and analyse the availability of leisure time to Canadians and their use of it. The emphasis in this study, which was to be completed in the summer of 1969, is on identification of the motivational factors associated with participation in park-oriented outdoor recreation.

Research - Activities of the Research Section were devoted primarily to initial work on the Canadian Outdoor Recreation Demand Study.

To provide the Branch with continuous and detailed information for operation and planning purposes, a system to monitor the use of all national park campgrounds was put into effect.

An examination of the characteristics of the visitor to national historic parks was conducted as a pilot project at Fort Malden, Ontario. The survey confirmed that the local population and organized school groups provide the majority of visitors to this site.

Liaison and Co-ordination - Like all outdoor recreation resources, national parks are affected by the demands made by an increasingly leisure-oriented society. Policies were reviewed with the object of providing more scope and flexibility in developing the parks into a comprehensive system capable of coping with these demands.

Special attention was focussed on establishing outstanding sections of shoreline as national parks since shoreline available for this purpose is becoming both scarce and expensive. To aid in the establishment of national shoreline parks, a new principle of cost-sharing in the acquisition of lands was introduced.

A continuing effort was made to improve liaison, consulting and co-ordination with other federal agencies, such as ARDA, and with provincial parks authorities. The Branch joined with Ontario in a special study of the Rideau waterway and region, and its historic and recreational resources.

The joint Canada-U. S. A. Committee on National Parks and its sub-committees met in the U. S. A. By arrangement with the U. S. National Park

Service, Department of the Interior, an exchange of planners at the working level was made. As such exchanges result in added experience and training it is expected they will become regular practice.

Branch officials participated in the annual Federal-Provincial Parks Conference; as an informal link between the Branch and the ten provincial parks administrations, the conference has become a valuable means of exchanging ideas and information. Officers of the Branch participated in a number of other conferences and university seminars concerned with parks and outdoor recreation resources.

The International Union for the Conservation of Nature and Natural Resources (I. U. C. N.) was invited to hold its 1972 General Assembly in Banff National Park. General Assemblies are held every three years.

National Historic Sites Service

Operations - The interest of the public in Canada's heritage, generated by the Centennial activities of the preceding year, continued to be felt during 1968-69 fiscal year. The number of visits to national historic parks and sites increased once again over the previous year. A completed summary of visitor statistics is appended. See pages 8 and 12.

In the year 1967-68, the Service was reorganized into two Divisions, Operations, and Research. In the year under review, this reorganization came into full effect - enabling the Service to give greater attention to specific areas - in particular, the proposed levy of admission fees, the development of long-range planning, the development and issuing of policy directives specific to national historic parks and sites, and completion of the thematic study of the fur trade in the Canadian West.

At the same time, the Service entered into some entirely new ventures, arranging for the production and sale of postcards and model kits at six national historic parks. Another change instituted at the parks was a smart new uniform for the 120 university students employed as guides for four months during the height of the visitor season.

A number of major events also occurred during the 1968-69 fiscal year, including the opening of Castle Hill National Historic Park, Newfoundland's second. Located at Placentia, the park was opened on June 19th by the Honourable Hédard Robichaud, then Minister of Fisheries. A temporary audio-visual trailer display unveiled on that occasion depicted the history of Castle Hill, with emphasis on French and British influence in Newfoundland. The remains of the fortifications were also stabilized later that summer, a task to be completed during 1969-1970. The same day as the Castle Hill ceremony, a new visitor reception centre was opened at Signal Hill National Park in St. John's. Displays at this centre told the story of "St. John's and the Sea".

At an impressive ceremony at Lower Fort Garry National Historic Park, Selkirk, Manitoba, the following month, the Honourable Jean Chrétien, as one of his first official duties as Minister of Indian Affairs and Northern Development, accepted from the Managing Director of the Hudson's Bay Company title to York Factory on Hudson's Bay. The Department intends to preserve York Factory, one of the oldest trading posts in the Canadian North, with a view to restoring it when public access is made easier.

Another new site was added to the national historic sites system in September when the Royal Canadian Mounted Police transferred Fort Walsh, near the Cypress Hills of Saskatchewan, to the Department. Steps were taken to winterize and protect the buildings until the Branch is in a position to begin development, tentatively scheduled for 1972.

Another site of popular interest, transferred by the Province of Manitoba to the Service, is the Riel House in St. Vital, which will be used as a centre to interpret the life story of the Métis leader.

Negotiations for the transfer of several other potential parks were undertaken with provincial and municipal governments. These included discussions with the Province of Alberta for the establishment of the province's first national historic park. Proposed sites included the Cochrane Ranch, Rocky Mountain House and two of the well-known Buffalo Jumps.

Discussions were concluded with the Province of Ontario for the transfer on October 1, 1969 of Fort George, Navy Hall, the Rainbow Bridge Interpretation Centre,and the Brock Monument at Queenston Heights for

Table 1 - Comparative Attendance Figures, National Parks

National Parks	1968-69	1967-68	Increase or Decrease	Per cent
Banff	2,147,425	2,050,735	+ 96,690	+ 4.71
Cape Breton Highlands	689,973	810,651	- 120,678	- 14.88
Elk Island	277,925	232,286	+ 45,639	+ 19.64
Fundy	632,092	518,249	+ 113,843	+ 21.96
Georgian Bay Islands	24,706	14,927	+ 9,779	+ 65.51
Glacier	871,672	885,947	- 14,275	- 1.61
Jasper	834,748	652,186	+ 182,562	+ 27.99
Kejimkujik	58,751	-	+ 58,751	-
Kootenay	637,589	684,519	- 46,930	- 6.85
Mount Revelstoke	913,671	894,286	+ 19,385	+ 2.16
Point Pelee	744,113	715,046	+ 29,067	+ 4.06
Prince Albert	137,928	156,864	- 18,936	- 12.07
Prince Edward Island	1,345,799	769,970	+ 575,829	+ 74.78
Riding Mountain	759,967	731,172	+ 28,795	+ 3.93
St. Lawrence Islands	102,830	149,580	- 46,750	- 31.25
Terra Nova	247,338	292,798	- 45,460	- 15.52
Waterton Lakes	516,112	503,729	+ 12,383	+ 2.45
Yoho	912,940	855,224	+ 57,716	+ 6.74
Totals	11,855,579	10,918,169	+ 937,410	+ 8.58

development within the federal system.

Negotiations continued with the Province of Newfoundland for the development by the National Historic Sites Service of the viking site at L'Anse aux Meadows as a national historic park. In Québec City, the Mayor advised the Service that funds were at last available for the expropriation of the lands necessary to the development of Cartier-Brebeuf National Historic Park.

As a result of recommendations made by the Historic Sites and Monuments Board of Canada during the fiscal year, discussions were initiated with some of the provinces for restoration of nationally significant structures under co-operative agreements. The federal government will provide up to 50 per cent of the cost of acquisition and preservation, and the other party agrees to maintain and operate the structure open to the public. These structures include the Chapman and Prescott Houses in Nova Scotia. In Ontario, preparations were undertaken to enter into the first agreement with the Ontario Heritage Foundation, for the preservation of the Niagara Apothecary at Niagara-on-the-Lake.

Major agreements signed during the fiscal year include those with the Province of British Columbia for the preservation and operation of Fort St. James and with the Province of Newfoundland for the acquisition, preservation and operation of the St. Thomas' Rectory. Contributions towards these projects by the Department are estimated at $225, 000 and $157, 500 respectively. During the 1968-69 fiscal year, a total of some $105, 500 was paid out under various co-operative agreements.

Special projects carried out by the Service during the year included the Yukon Feasibility Study based on a 1967 Board recommendation; completion of the report on the Fur Trade in the Canadian West, which the Board has recommended be published in time for the Fur Trade Conference in 1970 (see Historical Research); and submission for approval of a development program for the Halifax Defence Complex.

Work also continued in the programs to preserve and suitably mark the graves of the Fathers of Confederation, to establish a new design for commemorative plaques, and to replace the current ones.

Substantial progress was made in the restoration of Big House at Lower Fort Garry, while at the Fortress of Louisbourg the Governor's Wing of the Château St-Louis neared completion for a proposed September 1969 opening.

National Historic Sites plaques were unveiled at Sarnia, Ontario, commemorating Canada's second Prime Minister, the Honourable Alexander Mackenzie; at Trinity, Newfoundland, dedicated to the Reverend John Clinch who introduced the Jenner vaccine to British North America; at Orillia, Ontario, to the humourist and novelist Stephen Leacock; at Steele Narrows, Loon Lake, Saskatchewan, the scene of the last engagement in the 1885 uprising; at Poutrincourt's Mill, Lequille, Nova Scotia, site of the first flour mill in Canada; at Guelph, Ontario, the birthplace of Colonel John McCrae, author of the memorial poem "In Flanders Fields"; and at Oil City, Waterton Lakes National Park, site of the first oil well in western Canada.

The Historic Sites and Monuments Board of Canada held meetings in St. John's, Newfoundland, June 19-23 and in Ottawa November 28 and 29. Dr. Peter Waite of Dalhousie University was appointed to the Board on October 3, 1968. A complete list of Board members is set out on page 13

Archaeological Research - The Archaeological Research Section carried out the following excavation projects at national historic parks: the third and final season of major excavations at Fort Beauséjour National Historic Park, New Brunswick; a second season of archaeology at Castle Hill National Historic Park, Newfoundland; a project at the Roma Settlement, Prince Edward Island; a site survey of 17th and 18th century Acadian villages in the Chignecto Isthmus of New Brunswick and Nova Scotia; a fourth season at Lower Fort Garry National Historic Park, Manitoba; a small excavation of a pottery near East Selkirk, Manitoba, which supplied Lower Fort Garry; a small salvage excavation at Fort Anne National Historic Park, Nova Scotia; and a magnetic survey on the ice of Chaleur Bay, Québec and New Brunswick, to locate ships sunk in the 1760 Battle of Restigouche. Concurrent and continuing throughout the year were artifact research and cataloguing of material from previous excavation projects carried out by the Service, including Coteau-du-Lac National Historic Park, Québec; Yuquot, British Columbia; Fort Gaspereau, New Brunswick; and material from previous seasons' work on the sites listed above. Most of the artifact research centered on ceramics, kaolin smoking-pipes, buttons, hardware and glass.

Historical Research - The Historical Research Section carried out detailed studies on the history of Gaspé during the French regime; the Martello

Tower in West Saint John; the Motherwell Homestead at Abernethy, Saskatchewan; the history of Fort Mississauga; the structural evolution of the R. C. M. P. schooner St. Roch; and an analysis of early Acadian settlements in the Grand Pré area. The most significant study completed was the 500-page Thematic Study of the Fur Trade in the Canadian West, which was done at the request of the Historic Sites and Monuments Board of Canada, and provides a detailed outline of significant events, trends, personalities and sites related to the trade. Shorter research projects were completed on the 6th Regiment of Foot at Lower Fort Garry; the Battle of Queenston Heights; A. G. Bell's hydrofoil experiments; and the railroad history of Rogers Pass.

Architectural Inventory - The research projects carried out by the Architectural Inventory Section reflected a growing public interest in early Canadian architecture. A record number of requests was received by the Historic Sites and Monuments Board for the preservation of old buildings, and,in response,over 70 buildings were studied and examined. Planning proceeded on the National Inventory, and further recording techniques were developed. Major reports were completed on bell-cast roof cottages and stone windmills in Quebec. Sample recordings were made in the Maritimes and Ontario to determine more precisely the criteria to be used in selecting buildings for inclusion in the nation-wide inventory.

Table 2 - Comparative Attendance Figures, National Historic Parks and Major Historic Sites

Parks and Sites	1968-69	1967-68	Increase or Decrease	Per Cent
Alexander G. Bell Museum	137,841	108,351	+ 29,490	+ 27.21
Batoche Rectory	13,336	12,994	+ 342	+ 2.63
Battleford	43,431	42,803	+ 628	+ 1.46
Bellevue House	18,937	29,052	- 10,115	- 34.81
Carleton Martello Tower	50,836	44,443	+ 6,393	- 14.38
Castle Hill	7,965		+ 7,965	-
Coteau-du-Lac	15,005		+ 15,005	-
Fort Amherst	50,595	33,618	+ 16,977	+ 50.49
Fort Anne	78,264	68,783	+ 9,481	+ 13.78
Fort Beauséjour	70,160	59,094	+ 11,066	+ 18.72
Fort Chambly	123,874	123,046	+ 828	+ .67
Fort Langley	122,394	123,204	- 810	- .65
Fort Lennox	46,331	39,616	+ 6,715	+ 16.95
Fortress of Louisbourg	194,373	194,653	- 280	- .14
Fort Malden	73,270	68,432	+ 4,838	+ 7.06
Fort Rodd Hill	106,422	79,051	+ 27,371	+ 34.62
Fort Wellington	58,880	76,799	- 17,919	- 23.33
Grand Pré	75,669	54,975	+ 20,693	+ 37.64
Halifax Citadel	664,375	533,152	+ 131,223	+ 24.61
Lower Fort Garry	137,368	132,620	+ 4,748	+ 3.58
Port Royal Habitation	54,459	39,504	+ 14,955	+ 37.85
Prince of Wales Fort	669	242	+ 427	+ 176.44
Prince of Wales Martello Tower	20,207	17,779	+ 2,428	+ 13.65
S. S. Keno	9,523	9,033	+ 490	+ 5.42
Signal Hill	340,352	602,074	- 261,722	- 43.47
Sir W. Laurier's House	10,934	9,312	+ 1,622	+ 17.41
Woodside	15,765	16,158	- 393	- 2.43
Totals	2,541,234	2,518,788	+ 22,446	.89

Historic Sites and Monuments Board of Canada

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CANADIAN WILDLIFE SERVICE

Introduction

The Canadian Wildlife Service was set up in 1917 to implement the provisions of the Migratory Birds Treaty made between Canada and the United States in 1916. Although the service has prime responsibility for the management of migratory birds, it does consult provincial wildlife agencies when setting hunting regulations. Canadian Wildlife Service responsibilities have grown. It now does research on wildlife in the national parks, the Yukon and Northwest Territories, and provides advice on wildlife management. Generally, the provinces are responsible for wildlife within their boundaries, but the federal role is growing in such areas as pollution and disease which cross provincial boundaries and require coordinated measures.

Canadian Wildlife Service activities may conveniently be broken down as follows:

Administration and Support Services

These services include support for university training in wildlife biology through scholarships and directed research grants:

Migratory birds - Research on, and management of, migratory birds as defined under the Migratory Birds Convention Act.

Wildlife research - Research on wildlife, particularly big game and fur-bearing mammals and the provision of information and recommendations to the Commissioner of the Northwest Territories, and to the Northern Administration, Indian Affairs, and National and Historic Parks Branches.

Pesticides - Research to determine the effects of chemical biocides on wildlife.

Pathology - Research to determine the occurrence and significance of wildlife diseases and parasites.

Limnology - Research in support of fisheries management in the national parks.

Interpretation - The development and operation of centres to interpret wildlife and wildlife conservation to the public.

Canada Land Inventory - Collection and mapping of data on capability of the land to support waterfowl and ungulates.

Information - Dissemination of wildlife information to the public.

Migratory Birds

Land Acquisition - About 70 per cent of North America's most hunted species of migratory birds nest and raise their young in the potholes of the three prairie provinces. The wetland conditions which favour the persistence of these potholes are threatened not only by cyclical natural drought, but by competing land uses, such as drainage for agriculture or settlement, which would result in the permanent loss of suitable nesting areas. A major concern of the Service in recent years has been to develop ways to preserve wetland habitat by paying landowners who agree to reserve their land for the production of migratory birds.

In 1967-68, a ten-year program to preserve wetlands by agreements with landowners became operational after a four-year pilot program. Landowners who agree not to drain, burn, or fill their wetlands receive an annual payment of 6 per cent of the value of the land at the time of signing. Payments are based on the area of the wetlands and the value of the surrounding land. The agreements may be cancelled by either side on 60 days' notice. It is expected that many of them will be renewed at the end of 10 years.

During the first year, agreements for 29, 000 acres of wetlands were concluded. In 1968-69 agreements were concluded with landowners for 32, 000 acres and it is expected that payments will total $1, 000, 000 over the ten-year period.

Early in 1968, a five-year agreement was signed between the Department and the Lower Kootenay Indian Band Council near Creston, British Columbia, to preserve 3, 300 acres of wetlands on the Reserve. The wetlands are important to migratory birds on the Pacific Flyway. Annual payments to the Band will be about $50, 000. In addition, the Band will set a fee for visitors who wish to hunt on the Reserve. Members of the Band will be employed in waterfowl management projects including water-level control.

During 1968-69, 18, 000 acres of wetlands in Saskatchewan, New Brunswick, Nova Scotia and Quebec were purchased as National Wildlife Areas. Total area now under federal ownership is 36, 668 acres. The primary use of the areas is for stop-over during migration, but breeding areas will be improved through management to increase their productivity.

Birds and Aircraft - Through membership on the National Research Council's Associate Committee on Bird Hazards to Aircraft, the Canadian Wildlife Service co-operates with 33 other nations working on this problem.

During 1967-68, studies conducted in France, with the co-operation of the Service technique de la navigation aerienne, indicated that local movements of birds between feeding and roosting areas may be as hazardous as major migrations of large birds. Investigation of a similar problem in Vancouver was continued.

New understanding of bird movements, not possible by direct visual observation, is being provided by radar. The technique of time-lapse photography of plan-position indicator radar is an ideal way to study bird migrations. And biologists have been able to prove to initially sceptical radar operators that "angels" on their screens are, in fact, birds.

Detailed photographic records of radar screens made in 1965, 1966, 1967, 1968, and 1969 have been reviewed, and tha data correlated with weather data from similar and adjacent locations. It is believed that the departure of migration flights is triggered by certain combinations of weather conditions. For example, one of the most important of these appears to be following wind.

When more is known about the details of these combinations of weather factors it may be possible to predict bird movements by studying weather forecasts for a given region. The aim is to improve the quality of forecasts of serious bird hazards until they are accurate as forecasts of such comparable hazards as thunderstorms.

To make airports less attractive to birds, habitat is being modified. As a result, although the number of strikes is increasing, a higher proportion involves small birds which cause less serious and expensive damage. For example, Air Canada's repair costs for bird damage have declined, although it has more aircraft and operates more flights than ever.

Substitudes for Lead-Shot - Expended lead-shot on the bottom of ponds and streams is mistaken for grit or food and is eaten by ducks. Lead-poisoning causes paralysis and the birds starve to death. It is estimated that 6 per cent of the population of some species is lost in this way. This loss may amount to 750,000 birds a year - the equivalent of the take by all hunters in the Province of Ontario. Experiments are underway to develop a suitable substitude. The ideal shot will be non-toxic and drop-off sharply in velocity after about 50 yeards to reduce crippling loss.

Ornithology - The Migratory Bird Population Section of the Canadian Wildlife Service is responsible for co-ordinating research programs concerned with influencing numbers of birds; this includes studies of birds and their habitat. A second function is the annual assembly of data from surveys and the translation of these data into regulations that govern the conditions under which persons may hunt migratory birds. The Section is also concerned with the efficiency of the surveys designed to measure the size of the autumn flights of birds and the numbers taken by hunters.

Attention continues to be given to rare and endangered species of birds. The number of whooping cranes has not substantially increased, despite protection. Mortality has been found to be highest among yearling cranes.

It was found that survival of newly hatched young was lowest in wet years; therefore in June 1967 it was decided to remove one egg from each of six nests in this species' nesting area in Wood Buffalo National Park (usually only one of the two eggs laid in each nest survives). Observations confirmed that in each case the parents returned to the nest to incubate the remaining egg. The program was continued in 1968 and 10 eggs were taken. In November 1968 a record 50 wild birds returned to their winter breeding ground in the Aransas National Wildlife Refuge, Texas. Including birds in captivity the world population reached 68, the highest in this century.

In 1968, studies of Ross' geese and lesser snow geese were shifted from Arlone Lake to Karrak Lake, Northwest Territories. The latter is the site of a newly-discovered colony of Ross's goose. Intensive studies of lesser snow geese and small races of Canada geese were continued in the McConnell River area south of Eskimo Point, Northwest Territories. A study of predation by parasitic jaegers in the same goose colony was concluded.

A biological assessment of geese nesting on the Great Plains of the Koukdjuak, on the Foxe Basin coast of Baffin Island, was terminated and a final report was in the process of being written.

A study was begun of the trace elements found in the feathers of birds. It is hoped that this technique will permit tracing of birds,taken elsewhere, back to their place of origin. Such a scheme will be an important adjunct to bird banding.

Investigations of gannets at Bonaventure Island and puffins in Witless Bay, Newfoundland, were continued.

Field studies of snipe were continued in eastern Canada. A monograph on the bufflehead duck is well advanced.

On the prairies, a study of the behaviour of shoveler ducks was completed, and studies were in progress on the feeding and nutrition of waterfowl, on factors affecting reproductive success in waterfowl, and on the limnology and hydrology of potholes. Increased attention was given to ecological assessments of large river deltas involved in hydro-projects, especially the Peace-Athabaska. Investigations were started of populations of Canada geese and white-fronted geese important to prairie hunters.

The Canadian Banding Office - The use of numbered metal leg-bands for marking birds is a well-known, time-honoured technique for studying the movements and harvest of migratory birds. Canada and the United States co-operate in the maintenance of a single record system.

The percentage of bands recovered by hunters indicates the size of the year's kill. The locations of the recoveries indicate migration routes and major harvesting areas. Coupled with the results of waterfowl population surveys on the wintering grounds and on the breeding range the following spring, results may indicate a need for reduced seasons or bag limits in specific sectors, or perhaps show the possibility for an increased harvest in some areas.

Over the years, the master file of records has been maintained by the United States Office. This was reasonable since about 90 per cent of the banding records originate in that country. In 1969 a model 360-65 IBM computer was installed in the Bird Banding Laboratory of the United States Bureau of Sports Fisheries and Wildlife.

From the computer, the Canadian Office will receive continental records on magnetic tape. We have Canadian computer facilities available to us and can now look forward to a greatly improved facility for servicing the needs of Canadian scientists, both within and without the Wildlife Service.

The Canadian Banding Office became a part of the Migratory Birds Population Section late in the fiscal year and a biologist with training in computer science was added to the staff to prepare for the expanded role of the Canadian Wildlife Service in studying and managing Canada's waterfowl resources.

Biometrics - Canada migratory game bird hunting permit and associated surveys. Improved surveys to estimate the annual harvest of waterfowl in Canada were recommended by the International Migratory Bird Committee. Continental management of waterfowl depends on knowledge of the latest fluctuations in bird populations. Surveys of various kinds are carried out to gain this insight.

The Canada migratory game bird hunting permit was instituted in 1966 to provide information on the numbers of waterfowl hunters. The permit is sold by post offices for $2. 00 and, with the exception of Indians, Eskimos and persons hunting in the Northwest Territories, must be purchased by all hunters of migratory game birds. Over 385, 000 persons purchased permits during the 1967-68 season. In the 1968-69 season, the sale of permits increased by approximately 2, 500.

Results of the Waterfowl Harvest Survey of 1967 were published and the survey was put into operation again in 1968.

An experimental survey to determine the proportion of various species in the harvest was carried out in the Maritime Provinces in 1966. It was expanded to cover the whole country in 1967. A sample of hunters was asked to contribute a wing from each duck and the tail feathers of each goose shot. Using those parts, biologists identify the species, age, and sex of the bird.

The completion of a four-year program of developmental research has resulted in an organized and operating procedure for the annual collection of information on numbers of hunters of migratory game birds, and the size, location and composition of the harvest. This procedure provides Canada with management information comparable to that of our counterparts in the U.S.A. In addition, it enables Canada to play an enlarged role in the continental management of this renewable natural resource.

Advisory Services - Biometrics - The Section provides advisory services to biologists of the Branch and arranges for projects requiring experimental designs, survey designs, data retrieval systems, and statistical analyses of various kinds.

Wildlife Research - Mammalogy

Caribou - The population of barren-ground caribou declined from about two or three million in 1900, to 670, 000 in 1948-49, and to 280, 000 in 1955-56. The main causes for this decline were excessive hunting; burning of forested winter range; and in some years, poor calf survival due to severe weather on the calving grounds.

Various conservation measures were instituted and a 1967 survey of the range showed that there were about 350, 000 caribou. There is evidence that a further increase is likely.

In March of this year, 40 woodland caribou were airlifted from Quebec to Cape Breton Highlands National Park to augment the herd of 18 animals introduced there in 1968. The caribou released last year adapted readily, and several calves were born. This year's round-up and capture took place in the Gagnon area of Québec, 150 miles northwest of Sept Iles. The animals were corralled, tranquilized, flown to Sydney, and taken by truck to the park. The National and Historic Parks Branch, the Canadian Wildlife Service, The Québec Department of Tourism, Fish and Game, and the Nova Scotia Department of Lands and Forests, co-operated in the transfer.

A group of five biologists has been intensively studying the Manitoba-Keewatin herds, and will submit its final reports this year. Their studies include population dynamics, range-carrying capacity, movement, and development of a sound management program.

Basic nutritional needs and other requirements for growth, reproduction and lactation of barren-ground caribou and reindeer, are being studied in co-operation with the University of British Columbia.

Bison- Twenty-three specimens of the near-extinct wood buffalo were captured in the remote northwest section of Wood Buffalo National Park, and transferred to Elk Island National Park in 1965. This nucleus herd increased to 35 by 1967, and to 42 by 1968. A herd of 18 established in the Fort Providence area of the Northwest Territories in 1963 is now slightly in excess of 50.

Reindeer- In 1968, the Canadian Wildlife Service assumed responsibility for managing the reindeer herd in the Reindeer Preserve, Mackenzie Delta, Northwest Territories. Preliminary studies of the range were undertaken in 1966 to determine its value to reindeer and how many animals it could support efficiently. Studies on range carrying capacity and related research are continuing.

Wolves- The ecological study of wolves on the barren-ground caribou range was continued into 1969, and a final report was in the process of being prepared.

The feasibility of studying the ecology of wolves on Baffin Island, was assessed in 1965 in an area northeast of Wordie Bay. In 1966, the University of Toronto began a more intensive study, under contract, and expects to complete it in 1969. The report will be submitted in the form of a doctoral dissertation.

Polar Bear- Polar bear research was continued, and trapping and marking techniques were successfully applied. Some progress was made in co-ordinating Canadian Wildlife Service research with work being done by Ontario, Manitoba and Quebec. Initial studies on radio-tracking were begun in the Churchill area, and marking was continued. Eventually, we expect to include all polar bear ranges in Canada. Polar bear research and management in Canada is now being co-ordinated through a federal-provincial administrative and technical committee.

Grizzly Bear - The ecological study of grizzly bears in the Yukon Territory was continued in the Kluane Game Sanctuary. Additional biological data were obtained from bears killed by sportsmen elsewhere in the Yukon. Preliminary radio-tracking, introduced in 1968, was expanded in 1969 with good results.

Fur-Bearers- Field studies of muskrat and mink on the experimental trapping area in the Mackenzie Delta, N. W. T., will be terminated and the data will be analysed. Carcasses from marten trapped in the Anderson River area were collected for reproduction and other biological information. A study of the food and energy relationships of beaver in the area was completed in 1968 and a report, in the form of a doctoral dissertation was presented.

Mountain Sheep- Preliminary studies were begun on a game survey in the Mackenzie Mountains, Northwest Territories. Data on the kill of Dall sheep, grizzly bear, and caribou, from hunters in game management Zones 12 and 19, are being analysed, and the population dynamics of Dall sheep is being investigated.

A study of the population dynamics of Rocky Mountain bighorn sheep was progressing in four national parks - Waterton Lakes, Banff, Jasper and Yoho - where increasing sheep populations have produced range deterioration and subsequent die-offs. The research involves the age-structure, movement, health, and food supply of various bands in the parks. Alberta and British Columbia are making related studies outside park boundaries.

Forest Mammal Studies- Following an agreement with the federal Department of Fisheries and Forestry, the Canadian Wildlife Service is studying the influence of small mammals and ungulates on forest regeneration in Alberta and the Maritimes. The research group in Fredericton is attempting to determine how mammals inter-relate with the forest they inhabit. The scientists will also investigate the ecology of the snowshoe hare as part of forest mammal studies, which will continue into 1970.

Pesticides

The Canadian Wildlife Service has been studying the effects on birds of the continuing spruce budworm spray program in New Brunswick. Attention was given to finding organophosphate DDT replacements (e. g. Sumithion) which, unlike DDT, will break down promptly and not become long-term environmental contaminants.

The Canadian Wildlife Service will continue to co-operate with the federal Department of Fisheries and Forestry in developing a spruce-budworm insecticide that will do no important damage to other resources, such as fisheries and wildlife.

In 1966, pesticides residues were found in peregrine falcons and their prey along the Thelon River, Northwest Territories. Further collections of falcon specimens were made in 1967, and in 1968, the program was extended to the Arctic coast at Bathurst Inlet.

A survey of birds of prey in the prairies, with emphasis on prairie falcons showed that in several areas DDT is responsible for reproductive failure. In the last decade this species has declined by one-third in the southern region of both Alberta and Saskatchewan.

Because organochlorine insecticides readily accumulate in aquatic systems, the Canadian Wildlife Service began to look for the presence of pesticides residues in birds (including waterfowl) in freshwater areas of the western prairies and British Columbia. This represented the prelude to a more detailed study.

In New Brunswick, laboratory research was continued to determine lethal doses to native songbirds of pesticides replacing DDT. In addition, a field study of the effects of DDT residues on small mammals was begun.

Further collections of gannets were made on Bonaventure Island off the Gaspé coast to confirm pesticide contamination found in 1967. The study extended to a gannet colony off the east coast of Newfoundland, and to other nesting seabirds in southern Newfoundland.

In 1967, the Canadian Wildlife Service participated in an international monitoring experiment involving 14 countries. Pesticide residues were measured in areas not directly treated in order to discover trends in contamination of the biosphere as a whole. The program was repeated in 1968 and, during the one year between collections in Canada, no startling changes were recorded.

Pathology

In addition to research on diseases and parasites in wildlife, an implementation of disease control programs, the Pathology Section diagnoses and identifies material submitted by field officers and others. It also operates a unit for the histological preparation of animal tissues collected for research projects conducted by other personnel of the Canadian Wildlife Service; in veterinary matters, it advises some of the Department's agencies, and ensures liaison with provincial and federal veterinary bodies.

Anthrax vaccination of bison was resumed in Wood Buffalo National Park in 1968 and 2, 312 bison were inoculated. Only one death positively attributable to anthrax was recorded in 1968, in a non-vaccinated animal, in the same general area where the disease occurred in 1967. Close surveillance of the contaminated areas and mass vaccination will be continued in 1969. A bison management program to control anthrax and eradicate or control tuberculosis and brucellosis was planned for 1969. Slaughter of bison in the park was not undertaken in 1968, but will be resumed when the bison management program is implemented.

In October 1968, tuberculosis was diagnosed in wood bison at Elk Island National Park and 15 reactors to the tuberculin test have since been slaughtered. There are now 20 adult wood bison at Elk Island National Park. In collaboration with the Health of Animals Branch of the Department of Agriculture, a program was set up to eradicate the disease in these animals.

Under the herd reduction program at Elk Island National Park, 283 moose, 173 elk, and 22 white-tail deer were slaughtered and blood samples were tested for brucellosis. All of the 241 moose serum samples were negative. Of 145 elk serum samples, 142 were negative, one was positive, and two were suspicious. All of the 21 white-tail deer serum samples were negative.

Post-mortem inspection was performed by a veterinarian of the federal Department of Agriculture. Most of the animals were in good condition, but a few carcasses showed mucoid degeneration, probably reflecting their nutritive condition, and one had hydatid cysts. These specimens were unfit for use as food, and were condemned.

A study of the Kaminuriak barren-ground caribou population in northern Manitoba and the District of Keewatin, Northwest Territories, was initiated in April 1966. By March 1969, 999 animals had been examined for disease conditions and anomalies. Blood samples and pathological and parasitological material were collected for laboratory examination. Of 321 blood samples tested for brucellosis, 11 were positive. Although brucellosis does exist in the Kaminuriak barren-ground caribou population, it is not extensive enough to assess its prevalence, its significance in that particular caribou population, and its significance from a public health standpoint.

None of the sera tested for leptospirosis gave a positive reaction. There were no actinomycosis (lump jaw) lesions, and if this disease exists in the caribou population it is certainly not widespread. Actinobacillosis, recorded only once, appears to be uncommon.

The warble fly and the nostril fly are significant parasites of caribou. The adult flies greatly harass the animals during the June-September fly season. Warble fly larvae bore into the skin and migrate to the back of the caribou where they cut breathing holes which lower the value of the hides, and sometimes make them quite useless for any purpose. Invasion of the nasal passages by the larvae of the nostril fly may impede breathing and slow the running animal. Because of the predator-prey relationship of the wolf and barren-ground caribou, the latter is an important intermediate host of tapeworms occurring in wolves in northern areas. The most important parasite of this category in the barren-ground caribou is the hydatid cyst, the larval stage of Echinococcus granulosus, which can also cause a serious condition in man. In northern areas, man is mainly infected by dogs which feed on the contaminated viscera of game animals such as the barren-ground caribou. Extensive larval contamination occasionally makes the meat unattractive to humans, and this might affect sport hunting or commercial exploitation of caribou.

There is no evidence that parasitic infections of the digestive tracts, and verminous pneumonia are a problem in barren-ground caribou. Two protozoan infections were recorded: sarcosporidiosis and besnoitiosis, of which the latter is seemingly common. The significance of sarcosporidiosis in in caribou or other species is unknown and its public health status is not well understood. In some areas, besnoitiosis causes sterility in cattle and reindeer by invading the male genitalia. However, none of the infected caribou showed debilitation, loss of condition, or diseased testicles.

Field observation and post-mortem and laboratory examinations suggest that the health of the Kaminuriak barren-ground population is generally good. However, the significance of conditions such as brucellosis, lungworm infections, and besnoitiosis should be investigated further.

A study of the diseases and parasites of caribou and Dall sheep in the Mackenzie District was initiated in 1968.

Examination of 163 reindeer slaughtered at Atkinson Point, Northwest Territories, August 1968, did not reveal any significant disease condition. The serological test for brucellosis was negative in 158 animals, but incomplete reaction in five cases suggests that brucellosis is present in the reindeer. Since a relatively small number of the 2, 700 animals in the herd were tested, it is not possible to assess the prevalence of the disease. Only one hydatid cyst was found at this slaughter - a decline from previous slaughters reflecting improved herding and management practices, and improved methods of disposal of contaminated lungs. Man can become infected by dogs harbouring the adult form of the parasite; therefore contaminated reindeer offals must be properly disposed of.

The program for control of distemper, infectious hepatitis and rabies in dogs in Arctic Quebec was continued. Thirty-one hundred doses of distemper-infectious hepatitis vaccine,and rabies vaccine were shipped to various settlements. The Health of Animals Branch, Department of Agriculture supplied the rabies vaccine, and officers of the Northern Administration Branch distributed the vaccine and vaccinated the dogs. There were no significant outbreaks of disease where mass vaccinations had been carried out.

Investigation of parasites of wolf, wolverine, fox, lynx, and muskrat was continued in 1968. A study of parasites of the grizzly bear was completed and published. Studies of parasitism in bobcats and hares in the Maritimes, and gannets and other colonial sea birds of the Atlantic (Bonaventure Island, Québec, and Funk Island, Newfoundland) and Pacific (Queen Charlotte Islands) coasts were continuing at the end of the fiscal year.

A study of parasitic worms in birds of prey across Canada, as well as in species of sandpipers, gulls and various aquatic birds, and robins from British Columbia, was also being carried out whenever research material became available.

Limnology

Mountain National Parks - Much of the work accomplished in the fiscal year 1968-69 was in continuation of work started in 1967.

Creel census (angler's catch study) Patricia Lake: In 1968, the season's yield was 4,074 fish. Weight was estimated at 1,948 pounds, or 11.9 pounds per acre. It took an average of almost five hours to catch each fish. Eastern brook trout made up 44.6 per cent of the season's catch and predominated in the early part of the season. Rainbow trout represented the remainder of the catch and were more plentiful after mid-July 1968. The percentage of unsuccessful anglers was 69.8.

Beauvert Lake - Of 171 trout caught by gill-netting in 1968, 60 per cent were two years old. The ratio of rainbow to eastern brook trout was 2.6:1. Twenty-two three-year-old rainbow trout came from a planting of two-year-olds made in 1967; and 75 two-year-olds came from two plantings of yearlings made in 1967. These three groups made up 80 per cent of the total recoveries.

Trout Investigations - In 1967, enzyme analyses were made of specimens obtained from crosses of splake and eastern brook trout at Agnes Lake to determine whether the results of the various crosses could be predictable. To verify results of those analyses, 38 crosses were made in 1968. As incubation progressed, samples of eggs from specified individual crosses were collected and frozen every five days, and their enzyme development examined.

Enzyme studies were made of such organs as liver, spleen, kidney, brain, and eyes from splake, lake, and eastern brook trout. Some fish from the experimental crosses are being reared to fingerlings so that the results of enzyme analyses of the organs mentioned can be verified.

Opossum Shrimp (Mysis relicta) Attempts to locate opossum shrimp stocked in Pyramid, Minnewanka, and Moab Lakes were unsucessful. Stomachs of lake trout taken in Moab Lake contained no shrimp but mostly copepods and dragonfly nymphs. The presence of two amphopods in the samples indicates successful re-introduction after reclamation of the lake.

Baylucide trials, Mildred Lake, Jasper National Park: The chemical Baylucide was developed to kill snails, the intermediate hosts for fluke larvae which cause swimmer's itch. Two plots were marked out at Mildred Lake, and Baylucide was applied at the recommended rate. Results were checked by skin divers, and cages of snails and fish were set at different depths near the lake bottom. After 48 hours the caged fish were dead, except one speciment of four located in eight feet of water. Free-swimming fish seem to have avoided the toxic areas, and were unaffected. In both plots, the snails appeared to be dead but they all reacted to a probe by withdrawing into the shell. The toxicant did affect them, but was not enought to cause death.

Fish Hatchery Operations - The Maligne River hatchery was not as successful as expected. Heavy mortalities caused the loss of 50 to 95 per cent of young fingerlings four to 20 weeks old. After 20 weeks, mortalities declined rapidly, and normal development continued without excessive loss. The cause of death is still being investigated.

In 1968, 384,000 fingerlings, 411,000 yearlings, and 21,500 two-year-olds were stocked. Some 850,000 eastern brook trout eggs were collected from Princess Lake in Jasper National Park, 203,000 from the Vermilion Lakes in Banff, and 96,000 from Buffalo Lake in Waterton. Another 108,000 eastern brook trout eggs were obtained from brood stock. One million eyed-eastern brook trout eggs and 500,000 rainbow trout eggs were purchased. Two hundred thousand rainbow trout eggs and 100,000 cutthroat trout eggs were donated by the British Columbia Fish and Wildlife Department.

Various Studies: A survey of Mildred Lake showed mud depth up to 11 feet in the lake, reducing the water depth from 23.5 feet to 12.5 feet, and causing winter stagnation (lack of sufficient oxygen) each year.

Water level at the Vermilion Lakes in Banff was maintained through repairs to the old Beaver Dam, and spawning areas for eastern brook trout were improved by adding gravel to some spring areas.

Winter kill of the fish population in the second Vermilion Lake was overcome by aerating the water during critical periods.

At Lake Edith in Jasper National Park creel census was carried out on opening day.

Surveys and fish collections were also made at 15 lakes in Banff National Park.

Alpine Lakes - Basic research projects on alpine and montane waters of the western national parks were continued. Preliminary reports have been made, but major published papers are still being prepared, or are awaiting completion of certain phases of the research, which will be continued into 1969 and 1970.

Survey of Alpine and Montane Lake Waters-In this broad inventory and distribution study, about 40 additional lakes were samples, bringing the total to approximately 130. Valuable information has been gathered on water quality and on such physical aspects as ice cover, temperature, and dissolved oxygen. Zooplankton samples were collected for distributional and community composition reports and papers.

Primary production of Alpine waters Radioisotope studies of the phytoplankton (plant organisma) and its primary production in alpine waters were continued. Over 250 experimental runs have been conducted. Peak production appears to occur under the ice in spring, and studies on the nature of the phytoplankton community are made at that time.

Ecology of Freshwater Crustacean Zooplankton-Ecological relationships between certain species of zooplankton were investigated. The seasonal development and the year-to-year stability of the zooplankton community were subjects undergoing continuing study at the end of the fiscal year. Some emphasis has been on the taxonomy of zooplankton. The relationship between the presence of fish and the nature of the zooplankton community was also examined.

Effects of Rotenone on Zooplankton - To rehabilitate Patricia and Celestine Lakes in Jasper National Park rotenone was used in 1965 and 1966. Zooplankton have recovered very well from the use of rotenone in these lakes; however, their species composition, has not become stabilized. The study will be continued into 1969.

Prairie National Parks - Prince Albert National Park: Spawning runs of pike and walleye enroute to Waskesiu Lake were intercepted in Mud Creek and

Kingsmere River. Adult pike were tagged and released to study their movements, to determine to what extent they are fished, and to estimate the pike population in Waskesiu Lake. More pike entered Mud Creek than in previous years; walleye levels remained low.

In the Kingsmere River walleye runs were similar to those of previous years. One thousand adult walleye were tagged and released. Preliminary analysis of tagged fish recovered by anglers indicated that pike move extensively about Waskesiu Lake. Approximately 7, 500, 000 walleye eggs taken in the Kingsmere River were incubated at the Heart Lake hatchery. A fish-trapping site on the channel between Heart and Crean Lakes produced some 50, 000, 000 walleye and 2, 000, 000 pike eggs, most of which were incubated at the provincial fish hatchery in Fort Qu'Appelle. Hatching success was moderate - 10, 000, 000 walleye fry were produced, and most of them went to Waskesiu Lake.

Five sampling stations were established on Waskesiu Lake early in the season, and physical and chemical data and plankton samples collected. Gill net tests were made at some stations to sample the populations.

Adult lake trout were transferred from Wassegam to Crean Lake in October 1968, as they had been in 1964 and 1966. Anglers experienced good lake trout fishing during the summer. Most of the trout bore marks or tags from the earlier plantings, the first evidence of survival of a significant number of adult stock.

Adult lake trout transferred from Wassegam to Sandy Lake in 1966 and 1968 have thrived. Although they made up a large part of last season's catch, there has been a minor decline in their physical condition. It is not yet certain whether the stocked trout are reproducing.

Computer analysis for the creel census data is being developed to design new and less costly sampling procedures. The angler harvest survey will provide better clues to potential management problems.

The creel census, or angler harvest survey, indicated a higher level of fishing success in 1968. The catch of lake trout in Crean Lake has improved notably; and, on the whole, the lakes in this area provide good angling for pike, walleye and lake trout.

Studies of ciscoes were being continued at the end of the fiscal year. There are two distinguishable kinds of cisco in Waskesiu Lake which differ greatly in growth rate. Adults of the larger kind eat less plankton than those of the smaller kind. The former tend to eat other food items and may, therefore, be a better permanent forage species for lake trout in other lakes. The two kinds, when of similar size, cannot be identified by physical characteristics, but statistical tests have been useful in pointing out differences.

Riding Mountain National Park: Although Clear Lake has been successfully stocked with lake trout over a long period of time, the catch has been sparse. The stocks, however, are a source of eggs for fish culture at the Maligne River hatchery. Natural reproduction is limited and a new spawning reef has been created in the east end of the lake to correct this.

Adult walleye transferred to Clear Lake in the 1950's have established themselves. Natural reproduction has resulted in a wide distribution of young fish, and creel census records and gill-net tests indicate an abundance of large fish. Angling recreation in the park has steadily improved in recent years.

The creel census and biological studies show good fishing for walleye and lake trout in Clear Lake, for pike in Audy Lake, and for various species in other park lakes. More people visit this park than Prince Albert National Park, but the lakes do not enjoy the same popularity for fishing.

Atlantic National Parks - Investigations begun in the previous year in Terra Nova National Park were continued, and a suitable field laboratory was established. In 1968, three lakes were intensively investigated for primary production and physical and chemical conditions. In January 1969, two lakes were added to the sample.

The age and growth of brook trout populations were studied in four lakes. The upper lethal temperature and thermal resistance of brook trout were measured in controlled laboratory experiments. The enzyme studies on brook trout populations revealed that lactate dehydrogenese existed in different brook trout populations in many forms.

The development of the Atlantic salmon run was followed in the Upper Salmon River in Funday National Park, and a brief survey of aquatic resources was carried out in a proposed national park area in New Brunswick.

Interpretation

This was the first full year of the interpretation program. Emphasis was placed on the completion of plans and facilities for operating the Wye Marsh Wildlife Centre at Midland, Ontario, about 90 miles northwest of Toronto. Construction delays prevented preparation and use of the building until February 1969, when staff began installing displays held in storage since May 1968.

Biological studies of the birds, plants and aquatic life in Wye Marsh were undertaken. A large plant collection was assembled.

Designs, plans, and texts were completed for interpretation leaflets, aquariums, theatre equipment, trail signs, trail designs, nature trails, marsh dredging, outdoor displays, and other requirements of Wye Marsh Wildlife Centre.

Preliminary studies for future interpretation centres were undertaken at Amherst Point Sanctuary in Nova Scotia, and Last Mountain Lake in Saskatchewan.

Canada Land Inventory - In the early 1960's, studies of regional economic disparity revealed that in parts of Canada's renewable-resource use was not efficient. Many problems of depressed rural income stemmed from attempts to farm unsuitable land, and changes in land use and population distribution were needed. Changes could be effective only if the capability of land for agriculture, forestry, recreation, and wildlife were known; therefore, the Canada Land Inventory was set up.

The wildlife capability inventory consists of two parts: one, conducted by provincial biologists, defines capability of the land to produce ungulates (big game mammals); the other, conducted by the Canadian Wildlife Service, defines the capability of the land and adjacent water to produce waterfowl. Some 400 wildlife maps on a scale of 1:250, 000 will give data on an area, stretching from coast to coast, of approximately 1, 250, 000 square miles.

Mapping began in 1966. About 100 waterfowl and more than 35 ungulate maps have been completed. The first issues went on sale in mid-1969, and are available from Queen's Printer's bookshop at 35¢ each. It is expected that the inventory of wildlife capability will be completed during the fiscal year 1970-71, and the last maps will be published in 1971-72.

Information

Publications - Additional titles in the scientific report series published in 1968-69 were:

No. 5 - Denning Habits of the Polar Bear (Ursus maritimus Phipps)
No. 6 - Saskatoon Wetlands Seminar
No. 7 - Histoire naturelle du Gode, Alca torda, L., dans le golfe Saint-Laurent, province de Québec, Canada
No. 8 - The Dynamics of Canadian Arctic Fox Populations
No. 9 - Population Estimates of Barren-Ground Caribou March to May

Five Progress Notes were produced, and all new designs were developed for forthcoming numbers of the various Canadian Wildlife Service publications series.

Audio-visual - A film on how man-made changes to wilderness affect wildlife, with the wolf as a leading actor, was well advanced, and a new film on the Wildlife Service was begun. Both are scheduled for completion in 1970. The Canadian Wildlife Service and the National Film Board are co-sponsoring a 35mm. colour film on mountain sheep. A short teaching film on the barren-ground caribou was undertaken.

Four one-minute public service colour clips, added to the series on wildlife species, were in the process of being distributed to Canadian television stations.

Enquiries 46, 743 requests for information were received, more than twice as many as in the previous year. See Table 3.

Table 3 - 1968-69 Requests for Information on Wildlife

1968-69	Eng.	Fr.	U. S. A.	Sub-Total	Referrals	Totals
April	846	994	179	2, 019	181	2, 200
May	1, 309	1, 756	304	3, 369	274	3, 643
June	1, 018	1, 513	202	2, 733	184	2, 917
July	878	1, 506	144	2, 528	115	2, 643
Aug.	443	763	88	1, 294	63	1, 357
Sept.	1, 806	3, 948	182	5, 936	302	6, 238
Oct.	1, 989	3, 465	38	5, 492	192	5, 684
Nov.	1, 184	3, 399	34	4, 617	186	4, 803
Dec.	1, 432	2, 035	19	3, 486	161	3, 647
Jan.	2, 491	1, 612	29	4, 132	176	4, 308
Feb.	2, 080	1, 714	29	3, 823	198	4, 021
Mar.	2, 147	2, 878	12	5, 037	245	5, 282

DEVELOPMENT

INDIAN-ESKIMO DEVELOPMENT BRANCH

The Branch was established in September 1968, as part of a major reorganization of the Department, from elements of two former Branches - Indian Affairs and Northern Administration. The Branch comprises three Divisions - Lands, Resources and Industrial, and Small Business Services. A Finance and Management Adviser and a Personnel Adviser, co-ordinate the duties of the Branch.

The field organization consists of a number of resource and economic development specialists, and generalists employed in regional, district, and agency offices throughout Canada.

Branch functions include the administration of statutory responsibilities concerning Reserve and surrendered lands; resource and industrial development programs and assistance to native peoples to become established in business.

Lands

Two thousand and eight leases, permits and renewals of leases authorizing the use and occupation of Indian Reserve lands by non-Indians were dealt with by the Lands Division, and approved during the fiscal year. At the close of the year some 11,097 such transactions were in effect, representing an approximate income to Band funds and individual Indians of $5,179,665.

Administrative and technical services were provided to Bands and to individual Indians to enable them to participate more actively in administration of land assets. Work continued in the compilation and amendment of Indian Reserve schedules, inventories of sold and unsold surrendered lands and mineral rights. A total of 6,595 transactions were registered against

Indian lands.

More than 200 applications were received and processed from provincial departments of highways and electrical power or communications authorities, for the construction of roads and power lines on reserves and for resource development. During the year the petro-chemical industry applied for the right to extend its activities, including oil and gas pipelines, over Indian reserves.

The Pas Band of Indians in northern Manitoba surrendered a large tract of land for leasing to facilitate negotiations for the establishment of a pulp mill on the reserve. On the Ouiatchouan Indian Reserve on Lake St. John in Québec province, negotiations were carried out regarding the establishment of a large sawmill and wood manufacturing complex. Several new cottage subdivisions were opened up for leasing and work commenced on the White Bear and Sakimay reserves in Saskatchewan to upgrade existing recreational facilities and increase the number of properties available for leasing. An agreement was entered into with the Pictou County Research and Development Commission, whereby the Commission would lease a portion of Fisher's Grant Indian reserve No. 24, develop beach and recreation facilities, and transfer the responsibility for operation over to the Band.

In the field of training and development the Division provided the Crooked Lake Agency with the services of a leasing officer for a month to assist in the development of White Bear and Sakimay leasing programs. A week-long "Leasing Workshop" was held in Edmonton and attended by Indian Band employees and departmental employees from each agency in Alberta.

Resource and Industrial Development

The objective of the Resources and Industrial Division is to assist Indian Bands and individual Indians to secure the technical, managerial, and financial means by which they may develop available resources for the purpose of generating income and employment.

A total of 116 staff members were involved, of whom 65 were engaged full-time on matters directly related to the functions of this Division, and a further 51 in varying degrees since their duties extended to other departmental programs as well.

Activities of the Division include: administration and support services, natural resource development, e. g. , agriculture, commercial recreation, fisheries, forestry, tourist outfitting, wildlife, industrial development, and land use.

Agriculture - The objective of programs in this activity is to assist agricultural development on reserves, and to enable interested Indian people to become established in viable and competitive farm units.

Extension, technical, and managerial services are provided by departmental staff where available, but Indian farmers are also being encouraged to use services provided by other federal and provincial advisory agencies, and to enroll in educational training courses. Twenty courses of a technical nature were conducted with the co-operation of provincial agricultural departments, the Canada Manpower and Immigration Department, and other organizations. These courses provided 842 man-weeks of training to 303 Indian participants on a shared-cost basis with the contribution from this Department amounting to $14, 651.

Financial assistance is provided by the Department and by other federal and provincial agencies, such as the Prairie Farm Rehabilitation Act (P. F. R. A.), and the Agricultural Rehabilitation and Development Act (A. R. D. A.). During the year, negotiations were commenced with the Farm Credit Corporation to extend the provisions of the Farm Credit and Farm Syndicates Acts to include Indians' farming reserve lands.

Under the Rotating Herd Program, herds of up to 50 head are placed on loan to Indian farmers for periods of up to three years to assist and encourage them in raising livestock. The recipient provides feed and shelter for the herd and retains the progeny. This year 335 herds, consisting of 9, 346 head, produced 6, 009 calves. Expenditures under this program amounted to $239, 843 for purchase of cattle and $10, 142 for operational costs.

During the year 79, 502 acres were cleared and broken, 35, 340 acres drained, and 2, 550 acres irrigated. Some 654 miles of fence, and 94 livestock handling facilities were constructed on reserve pastures. In Saskatchewan and Alberta, a total of 11 pastures were established under P. F. R. A.

The Osoyoos' vineyard in British Columbia has been expanded to 90 acres. An irrigation system has been installed and over 9, 000 plants established. The Band operates this project under the supervision of a non-Indian manager, but all other employees are members of the Band.

Commercial Recreation - Under this activity, Indians are encouraged and assisted to develop on a commercial basis enterprises in demand by the travelling public.

As of March 31, 1969, Indians owned and operated 31 tent and trailer parks, 36 overnight accommodation facilities, 36 picnic grounds, 7 marinas, 6 museums and villages, 2 sightseeing tour services, and 6 other types of related businesses. During the past year, 39 of these were expanded and 13 new enterprises commenced.

A total of 5, 626 cottage lots situated on Indian-owned lands are under lease.

Qualified consultants concluded five studies, involving eight reserves, to define their full potential for commercial recreation opportunities, and to outline proposals for development.

Implementation was commenced on recommendations made in four studies concluded in the fiscal year 1967-1968, and on four completed this year.

Promotional activity included displays at two sports and vacation shows, one in Toronto, the other in Cleveland. The "Directory of Canadian Indian Tourist and Outfitters" was published, and widely distributed through both the provincial and federal government travel bureaus.

Expenditures in 1968-69 amounted to $273, 182 for capital projects and $55, 073 for operation and maintenance, making a total of $328, 255.

Fisheries - During the year two important events occurred in the fishing industry which will have far-reaching effects on the industry at large and on Indian fishermen in particular.

The first was the implementation of a program of assistance by this Department to the Indian fishermen of British Columbia. The program is administered by the federal Department of Fisheries through a committee known as the "Indian Fisherman's Development Board". The Board consists of five members, two of whom are of Indian status. Their main function is to review and make decisions on applications for loans and grants.

The funds made available under the program are used for loans and grants to upgrade the fishing fleet and for training and shore installations. There is also provision for grants to individuals of up to $2, 000 to enable older fishermen to continue in the industry.

As the program is new, concrete results will not become evident until 1969-70.

The second major event resulted from recommendations of the Commission of Enquiry into Freshwater Fish Marketing, which led to the establishment of the Freshwater Fish Marketing Corporation. The impact of the Corporation upon Indian fishermen will not be felt until 1969-70. Early in 1969, the Department initiated action to involve Indian fishermen in operations of the newly established Corporation.

During the 1968-69 fishing season, approximately 4, 300 Indian fishermen produced 44. 3 million pounds of fish at a landed value of $8. 2 million. This was 11. 7 million pounds below the 56 million pounds taken the previous fiscal year, with a landed value of $8. 9 million. As the number of licensed Indian fishermen declined from 6, 441 to 4, 300 during the 1968-69 period, there were substantial increases in gross earnings by each operator.

Upwards of 1, 300 Indian people, including 900 women, were employed in fish processing industries on the West Coast.

Forestry - Forestry operations on Indian reserves is an important source of employment and income for Indians and revenue for Band funds. Production during 1967-68 increased to 332, 121 cunits, with a roadside value of $6, 247, 321 compared with 314, 600 cunits produced in 1966-67, valued at $5, 056, 014. Revenue to Band funds from timber dues amounted to $779, 456. 05 in 1967-68.

A total of 47 Indian-owned and space-operated forest enterprises, including logging and milling operations,were provided financial assistance by

Indian-Eskimo Development Branch

Table 1 - Annual Survey Program

Survey Data	1964-1965	1965-1966	1966-1967	1967-1968	1968-1969
No. of survey requests	136	82	92	112	108
Completed:					
boundary surveys	20	22	31	35	49
subdivision surveys	22	28	19	24	11
other	14	5	6	3	18
Totals	56	55	56	62	78

Surveys completed by region	1964-1965	1965-1966	1966-1967	1967-1968	1968-1969
Maritimes	3	2	1	3	7
Quebec	3	4	5	5	5
Ontario	8	10	15	19	19
Manitoba	6	2	2	3	6
Saskatchewan	7	4	12	2	4
Alberta	3	8	3	3	1
District of Mackenzie	-	1	-	-	-
British Columbia and Yukon Territory	26	24	18	27	36
Totals	56	55	56	62	78

Indian-Eskimo Development Branch

Table 2 - Reserve Land Registry

Province or Territory	Bands	Reserves	Settlements	Acreages
Prince Edward Island	1	4	-	1, 646
Nova Scotia	12	38	-	25, 552
New Brunswick	15	22	-	37, 579
Quebec	40	26	13	188, 191
Ontario	110	166	5	1, 541, 254
Manitoba	54	103	-	541, 667
Saskatchewan	67	125	-	1, 256, 593
Alberta	41	92	4	1, 607, 506
British Columbia	188	1, 628	-	843, 179
Yukon Territory	16	-	26	4, 877
Northwest Territories	15	-	29	2, 153
Totals	559	2, 204	77	6, 050, 197

Indian-Eskimo Development Branch

Table 3 - Registrations by Type

1968-1969	Admin. Transfers	Land Transfers	Quit Claims	Minerals	Leases, Permits	Other	B. C. R.	Order in Council	Surrenders	Other	Totals
Apr.	50	68	6	-	245	21	4	6	1	10	411
May	32	56	12	23	140	17	2	13	2	12	309
Jun.	27	64	7	336	111	14	-	26	1	5	591
Jul.	32	45	19	122	207	8	6	8	1	12	460
Aug.	37	45	7	151	228	15	-	14	1	3	501
Sep.	30	51	16	307	134	11	5	15	3	5	577
Oct.	40	21	5	492	140	22	5	10	-	22	757
Nov.	28	31	3	700	161	14	14	6	-	14	971
Dec.	15	25	5	308	169	8	11	10	-	11	562
Jan.	18	30	4	344	63	4	46	6	4	13	532
Feb.	40	48	13	139	101	19	31	19	5	11	426
Mar.	55	39	8	119	123	17	18	17	-	13	498
Totals	404	523	105	3,041	1,912	170	142	150	18	130	6,595

Indian-Eskimo Development Branch

Table 4 - Land Transactions, Leases, Permits, Rights-of-Way, Types of Lease

Region	Total Leases, Permits, Rights-of-Way	Total Revenue (dollars)	Commercial	Industrial	Residential (cottages)	Recreation	Public Utilities	Agriculture	Grazing	Right-of-Way Easements	Total Permits	Total Leases
Maritime	55	15,498	12	2	1	1	7	-	-	32	38	17
Québec	310	188,906	33	1	225	4	4	32	-	11	32	288
Ontario	3,890	442,588	135	26	3,150	58	10	386	88	37	175	3,715
Manitoba	210	130,039	24	21	130	-	-	68	45	2	9	281
Saskatchewan	1,941	748,800	6	-	928	2	-	977	24	15	15	1,937
Alberta	1,953	2,629,527	40	290	4	5	21	1,430	51	100	14	1,927
British Columbia	2,659	1,024,307	236	300	1,390	23	15	348	41	306	345	2,314
Total	11,097	5,179,665	486	640	5,828	93	57	3,241	249	503	618	10,479

the Department at a cost of $116, 000.

The Department operates a forestry school at Chilcotin, British Columbia, which provided training and skills development in logging and sawmilling to 40 Indian students in 1968-69.

In co-operation with provincial resource people, 428 acres of seedlings were planted on 12 reserves. In addition, 500 acres were scarified to encourage regeneration and 300 acres were treated with chemicals to control insect infestation. A 10-acre Christmas-tree plantation was started as a pilot project in Manitoba.

At the request of the Department, the Department of Fisheries and Forestry conducted field surveys on the English River Reserve in Ontario and the Montreal Lake and Peter Pond Reserves in Saskatchewan. Completed forest survey management reports were published covering the Dokis, Wikwemiking, Little Red River, and Whitefish Lake Reserves. This Department also initiated work on an air photo reconnaissance record of all the reserves in Canada.

Fire protection agreements with the provinces continued in New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia. One new agreement was made with a forest protection association in Quebec. During 1968, there were 158 forest fires on 108 reserves, which destroyed 1, 808 acres of saleable timber, valued at $113, 000, and 14, 295 acres of non-saleable timber.

Tourist Outfitting and Guiding - The Department's program is aimed at assisting Indian people to develop opportunities available to them as entrepreneurs and to acquire the knowledge and skills required for more secure and rewarding employment in the industry. The program extends financial, managerial, technical and training assistance to those who demonstrate an interest and aptitude for this type of occupation.

There are now 114 Indian-owned tourist outfitting and guiding enterprises in operation across Canada. Over 500 Indians are employed in these operations which provide earnings totalling close to $400, 000. Notable among the successes in 1968-69 were the establishment of the Cape

Jones Goose Camp on James Bay in northern Québec, the Winish River Camp in Northern Ontario and the Pelican Narrows Camp in Saskatchewan. All have excellent facilities for catering to hunters and anglers.

In addition to these wholly Indian operations, about 3,500 other Indians are employed in the sports hunting and fishing industry as guides and in related occupations. Their income from this employment is estimated to be in excess of $2.5 million.

Total expenditures on the program in 1968-69 amounted to $171,453.

Wildlife Program - During the 1968-69 fur season, market demand for most wild fur species continued to remain firm, with a significant advance in prices for beaver, fox, lynx, and muskrat. Interest in long-haired furs increased and seal made a good recovery from the poor 1966-68 and 1967-68 seasons. Complete statistics for the 1968-69 season are not yet available, but the improved price structure provided the economic incentive for renewed interest in trapping for some 11,500 Indians, who still rely on the fur resources for much of their earned income.

Based on data collected by the Dominion Bureau of Statistics, the 1967-68 production of wild furs exceeded that of the previous fiscal year by 663,715 pelts, with total value advancing to $13,490,565, an increase of $725,200. Although not based on statistical data, because provinces and territories do not record Indian production separately, field reports estimate Indian production accounts for approximately 30 per cent of the over-all harvest valued at approximately $4 million. Average Indian trapper income from the fur harvest was about $340 in 1967-68.

Fur conservation agreements with the provinces of Manitoba and Saskatchewan, involve annual Branch contributions amounting to $60,000 to each province in support of their fur management and development programs. These agreements were extended for three years to March 31, 1972.

Total Branch expenditure for this program during 1968-69 amounted to $249,183.

Industrial Development - Secondary Industries

From April 1968, until January 1969, the Industrial Development Services Section operated as a Section in the Industrial Division of the Northern Administration Branch and, in this capacity, was concerned with the development of secondary industries in the Northwest Territories. In January 1969, the Industrial Development Services Section was transferred to the Resources and Industrial Division of the Indian-Eskimo Economic Development Branch. The new organization permits greater concentration of effort on the creation of job opportunities for Indians through the location and initiation of secondary industries on Indian reserves. Negotiations were underway with a number of manufacturers to establish branch plants on reserves. In addition to other developments in the secondary industries, during the period April 1968 to January 1969, the Section was instrumental in having two industries, (Baker Lake Duffle Garment Factory and Frobisher Bay Knitwear Centre) established.

Baker Lake Duffle Garment Factory - A garment factory was established at Baker Lake in May 1968, for the manufacture of parkas and embroidered jackets, gloves and headwear. The plant employs six Eskimo women and one Eskimo man in direct manufacturing, and offers work to many women in the settlement on a part-time basis, to do embroidery. All production is sold through the Canadian Arctic Producers, and it is hoped to turn over the operation of this plant to local people during the next two years.

Frobisher Bay Knitwear Centre - Three Eskimo women received training in knitwear technology in southern Canada. The purpose of this training was to provide a small work force equipped with basic skills for employment at Frobisher Bay in the fall of 1969. This operation will be carried out in conjunction with a southern manufacturer in the hope that after an initial trial period of operation, the plant would be handed over to private enterprise.

Developments in Secondary Industries - Technical assistance was provided to the Tuktoyaktuk Fur Garment Project; all product lines were redesigned and the manufacturing process was completely reorganized. The plant now employs twenty-eight Eskimo women and two Eskimo men, and has an approximate annual production of $100,000. It is expected the plant will be taken over by local people during the coming year.

The cannery at Rankin Inlet also received technical assistance from the Department; this involved a complete redesign of the packaging of Arctic char products as well as the introduction of a range of new products.

During the past year, work was carried out to investigate the possibility of establishing a number of industries at Frobisher Bay; these included a machine shop, a footwear plant, and a tannery. At Pangnirtung a study was carried out to examine the feasibility of establishing a weaving plant. In addition, work was carried out in the western Arctic to determine the commercial feasibility of the production of greenhouse crops at Inuvik and Norman Wells, and the possibility of establishing a lapidary industry at Fort Simpson.

Land Use

The Land Use Program is designed to assist Indians in the preparation of development plans for their reserves. A small staff of specialists advises Indians in matters of land management and economic development. The staff also assists and advises Indian Bands and individuals in seeking the services of consulting firms to analyse the economic opportunities available and to recommend plans, procedures, and structures for development.

During the year development plans were completed for 27 reserves and three other reserves were being completed. The cost of this work amounted to $323,975, of which $307,475 was paid by the Department, and the remainder paid by Indian Bands.

Small Business Services

Arts and Crafts Program - The Department's Program consists of two complementary parts, a Northern Program essentially for the Eskimos and a Southern Program for the Indians. The Department encourages the production and sale of Eskimo and Indian art and craftwork by providing financial assistance, administrative and technical guidance, marketing and promotion services. Arrangements were made to transfer the program in the Mackenzie

District to the Government of the Northwest Territories.

Northern Program - The budget for the year was $850, 000 and assistance was provided for arts and crafts development in 37 communities. The total value of Eskimo arts and crafts production from all sources was approximately $1.4 million, of which revenue from departmental projects was approximately $275, 000. In accordance with departmental policy, control over local programs grams was assumed in nine communities by co-operatives and locally organized groups.

The Department continued to support the activities of the Eskimo Arts Council, an independent group which advises the Minister on Eskimo art and related matters. The Council met five times during the year, and several of the members of Council made extensive trips into the Arctic to meet Eskimo artisans and local departmental officers to discuss production and marketing problems, and provide encouragement and technical advice to the local people. The Council is sponsoring a Masterworks Exhibition, comprising a collection from departmental and private sources of the finest work of outstanding Eskimo artists, which will be on show to the publics of major cities in Europe, the United States, and Canada, with financial assistance provided jointly by the Canada Council and the Department.

The Department also continued to support Canadian Arctic Producers Limited, a non-profit organization formed under the auspices of the Co-operative Union of Canada to promote and market Eskimo art and craft products. The Company now supplies over 700 dealers throughout the world. Sales for the year amounted to approximately $800, 000. During the year, a retail outlet was established at the Frobisher Bay airport.

Southern Program - The Southern Program was supported in much the same manner as the Northern Program by the provision of financial assistance for the purchase of materials and supplies, technical advice, and production and marketing services. A summary of activities is shown in Table 5.

Departmental officers worked closely with the Indians and other agencies in planning and carrying out programs in the various regions. In addition to departmental assistance some services were provided under ARDA and provincial government programs.

The Department operated a central marketing service which purchased craft products from approximately 500 producers, 85 per cent of whom live in eastern Canada, and supplied 374 dealers throughout Canada. Annual sales amounted to approximately $132,400. Team Products, a marketing agency in Alberta, was assisted by a grant of $35,750 and had retail sales of approximately $125,600.

The Department maintains a national display of contemporary Indian art, in Ottawa, in conjunction with the activities of the central marketing service.

Indian arts and crafts were actively promoted through displays at national, regional, and rural fairs and exhibitions. Trade fair exhibits at Toronto and Montreal resulted in direct sales of crafts valued at $20,000, and displays of Indian art and participation by Indian people at the Calgary Stampede, the Edmonton Exhibition, the Pionera, Pawitik, and the Provincial Exhibition of Manitoba, and other activities, were given support. An exhibition of contemporary arts and crafts was held at the Bronfman Centre, Montreal, and technical help and design assistance provided to the Iroquoian exhibit at the Toronto Indian Centre, the Y. M. C. A., London, Ontario, the Winnipeg Indian Centre, and the Six Nations Festival of the Arts.

Co-operative Development - Co-operative development was continued under the two programs already mentioned - a Northern program primarily involving Eskimos, and a Southern Program in which Indian participation was most prominent.

Under the Northern Program, three co-operatives were incorporated in the eastern Arctic and two in the Mackenzie District, bringing the total number in the Northwest Territories to 27, with a revenue of approximately $1.5 million and provided approximately $500,000 in income to the local people. Services were provided to Eskimos in Nouveau Québec by La Fédération des Co-opératives du Nouveau Québec, under contract with the Department, which reported nine member co-operatives with revenue of approximately $1 million, and income to the local people of approximately $167,000.

Indian-Eskimo Development Branch

Table 5 - Summary of Arts and Crafts Program

Region	Revenue (dollars)	No. of Outlets	Numbers partici-pating	Numbers Trained	Dept. Assistance (dollars)	Loans (dollars)
Maritimes	60,700	13	254	-	1,700	6,550
Quebec	108,000	19	633	90	10,225	3,000
Ontario	308,000	13	986	26	32,800	29,100
Manitoba	125,770	3	1,200	172	34,500	2,400
Saskatchewan	129,450	7	765	80	5,000	-
Alberta	90,800	2	782	233	9,000	-
British Columbia and Yukon	622,000	13	1,100	80	17,800	-
Totals	1,444,720	70	5,720	681	111,025	41,050

In collaboration with the Department's Education Branch, local adult education courses were conducted in the Eskimo language, and staff training courses were sponsored at Western Co-operative College. Material was supplied for weekly radio broadcasts over the Canadian Broadcasting Corporation's northern service, and for the bilingual (Eskimo and English) publication We Co-operate.

Under the Southern Program the Department continued to provide financial and other assistance to encourage and support co-operative development among the Indian people. Of the 123 co-operatives with a predominantly Indian membership, more than 100 were active in the prairie provinces with support primarily provided by the provincial administrations. In Québec, services to five co-operatives were provided by Le Conseil de la Co-opération du Québec, under contract with the Department.

Membership to Indian co-operatives increased to 7,756 and reported revenue was $5,008,000. Fixed and current assets exceeded $3.3 million. Members' equity was approximately $1.2 million.

Indian Loan Fund - This revolving loan fund, established many years ago to provide a source of credit to Indians who do not have access to ordinary lending institutions, continued to be of service in making cash available to those who required assistance in improving their economic position.

To cope with the demands made on the fund, the heaviest since it was established, the capital amount was increased from $2 million to $2.65 million. During the year, 139 loans totalling $1,095,909 were made to farmers, fishermen, lumbermen, craftsmen, bus operators, merchants, operators of trailer parks, hunting and fishing camps, for the establishment of a medical practice and for many Band co-operative projects. Repayments on loans made in the current and prior years total $377,996 and write-offs $75,943. Interest revenue amounted to $61,072. By the end of the fiscal year the capital amount of the fund was exhausted and action on a number of applications had to be deferred until additional funds were made available.

NORTHERN ECONOMIC DEVELOPMENT BRANCH

The Northern Economic Development Branch is responsible for the effective management of oil and gas, mining, water, forests, and land resources, and for developing the economy of the Yukon Territory and Northwest Territories. The tasks of the Branch are: to seek out and identify all means whereby the economy of the north can be rapidly expanded; to develop a broad plan of economic programs, and to recommend (and in some instances, manage) specific projects and policies for achieving these objectives. It also has the responsibility for developing all minerals, including oil and gas, on Indian reserves, in order to create employment and revenue for Indians and Indian Bands with as full a participation of Indians as possible in the planning and execution of the development programs.

The type of northern development sought is of a general, balanced nature. Its purpose is to ensure that economic growth in the Yukon Territory and Northwest Territories will continue without exclusive reliance on exploitation of non-renewable resources, even though the exploitation of such resources at the moment forms the only substantial basis for rapid economic growth. Only through the pursuit of such a development policy can the population of the territories be assured of continuing opportunities now and in the future.

It is considered that the key to any kind of rapid northern development lies primarily in the mining, and oil and gas sectors. It is intended to use any successes obtained in these sectors to create opportunities in other fields such as tourism, fish and game, hunting, lumbering and related industries, taking advantage wherever possible of inter-sectional linkages.

Accordingly, the Branch attempts to develop the kind of climate that will attract and encourage more exploratory and development outlay on the part of private enterprise through exploration assistance programs, the Northern Roads Program, the Airstrip Assistance Program, and with specific support for railways and electric power. It also undertakes feasibility studies in such matters as smelters, townsite planning, power studies, other projects related to northern resource development and, in some instances, gives financial aid to bring these projects to reality.

The Branch also has the important concommitant responsibility of ensuring that every economic and resource development program provides maximum opportunity for the employment of indigenous people in the areas concerned through co-operation with other appropriate arms of the Department and with all other relevant agencies of government.

The Northern Economic Development Branch is organized into closely related but separate units: Oil and Mineral Division; Water, Forests and Land Division; Economic Staff Group; and the Administrative Services Division.

Oil and Minerals

Oil and Gas - The Oil and Gas Section is charged with the following duties and functions: to originate, develop and implement policies, programs and procedures designed to stimulate and accelerate optimum exploitation of the oil and gas resources within the Yukon and Northwest Territories and adjacent Canada Lands; to regulate and manage the development of oil and gas lands and to encourage enhanced production on these lands; and to protect at all times the public interest, both in the disposition of rights and in the introduction of adequate conservation measures.

The Oil and Gas Section maintains files on wells, seismic programs, and other exploratory programs, and maintains a current knowledge of the value of the oil and gas potential of Canadian lands north of latitude 60°. It also studies many technical aspects of the oil and gas industry, and renders assistance to other groups and Branches of the Department in matters relating to oil and gas.

Reports Printed in 1968 - The seventh Schedule of Wells (1967), compiled and annotated by officers of the Oil and Mineral Division, is a report of all wells drilled and completed in the Yukon and Northwest Territories from 1965 to the end of 1967. It contains geologic tops of all wells drilled in 1965 and other basic information pertinent to wells in the Territories. Each of the wells is given a Unique Well Identifier Number. All wells are also listed under the Yukon Territory and Northwest Territories Grid System by latitude and longitude co-ordinates, and by the Universal Well Location Reference Number.

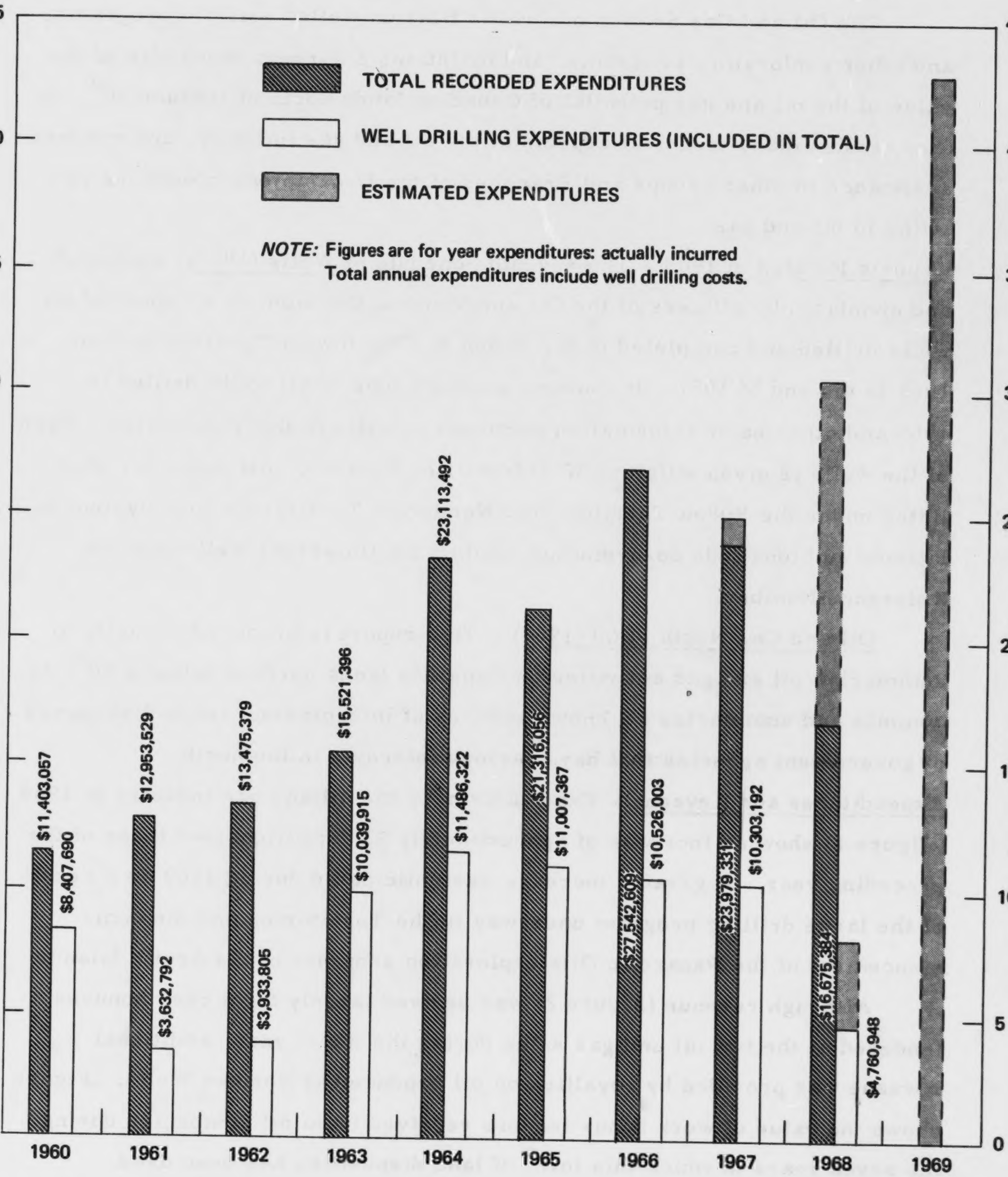
Oil and Gas North of 60 (1968) - This report is prepared annually to summarize oil and gas activities on Canada's lands north of latitude 60°, to compile and summarize all known sources of information, and to list names of government agencies that have various interests in the north.

Expenditures and Revenue - Expenditures by the oil and gas industry in 1968 (Figure 1) show an increase of approximately $2. 5 million over those of the preceding year. A greater increase was anticipated during 1969 as a result of the large drilling program underway in the Territories and the commencement of the Panarctic Oils' exploration program in the Arctic Islands.

Although revenue (Figure 2) was derived largely from cash bonuses tendered at the two oil and gas sales during the fiscal year, additional revenue was provided by royalties on oil produced at Norman Wells. Figure 3 shows the value of work bonus tenders received from oil companies during the seven years in which this form of land disposition has been used.

Northern Economic Development Branch

Figure 1 — Oil and Gas Exploratory Expenditures



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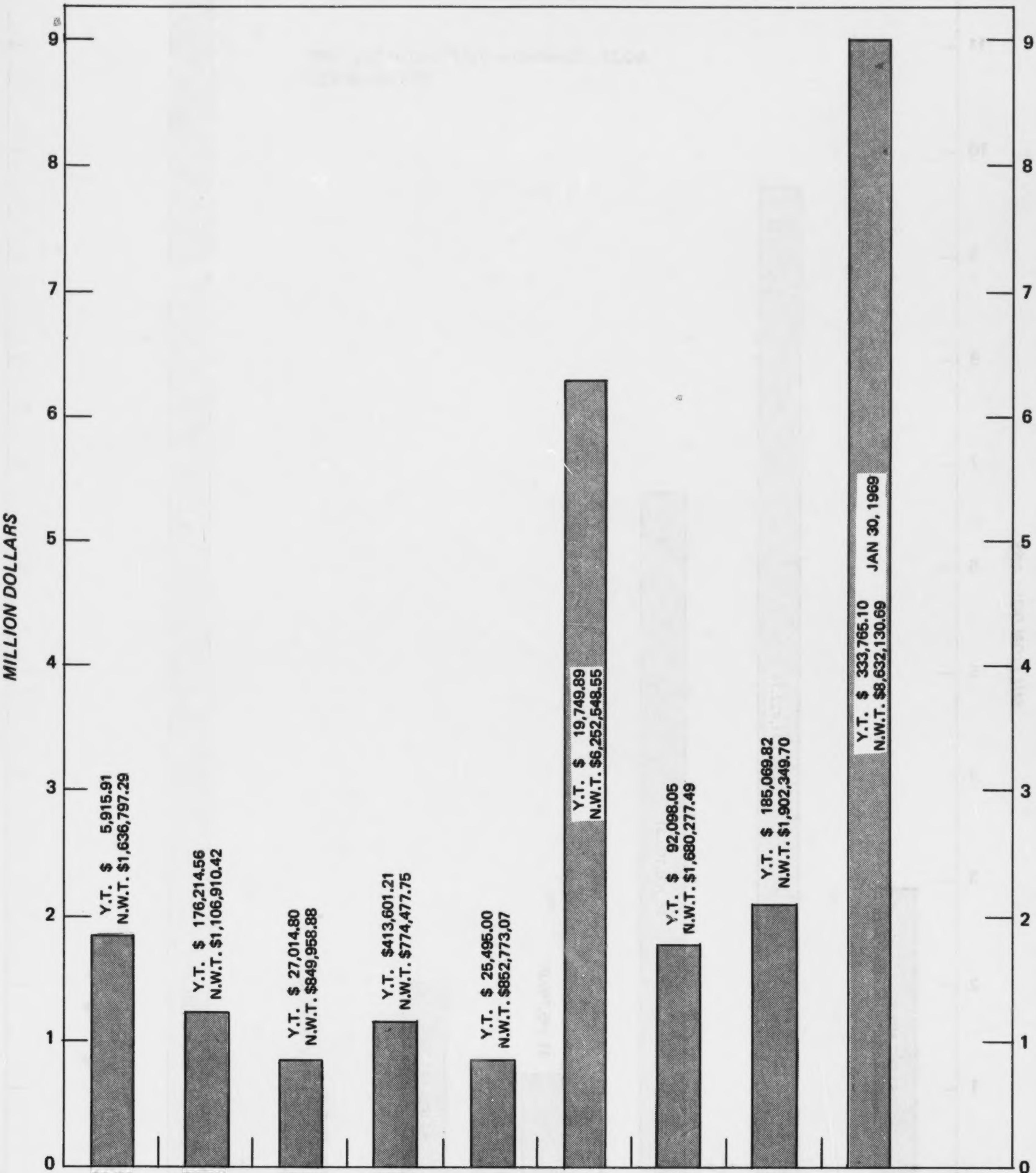
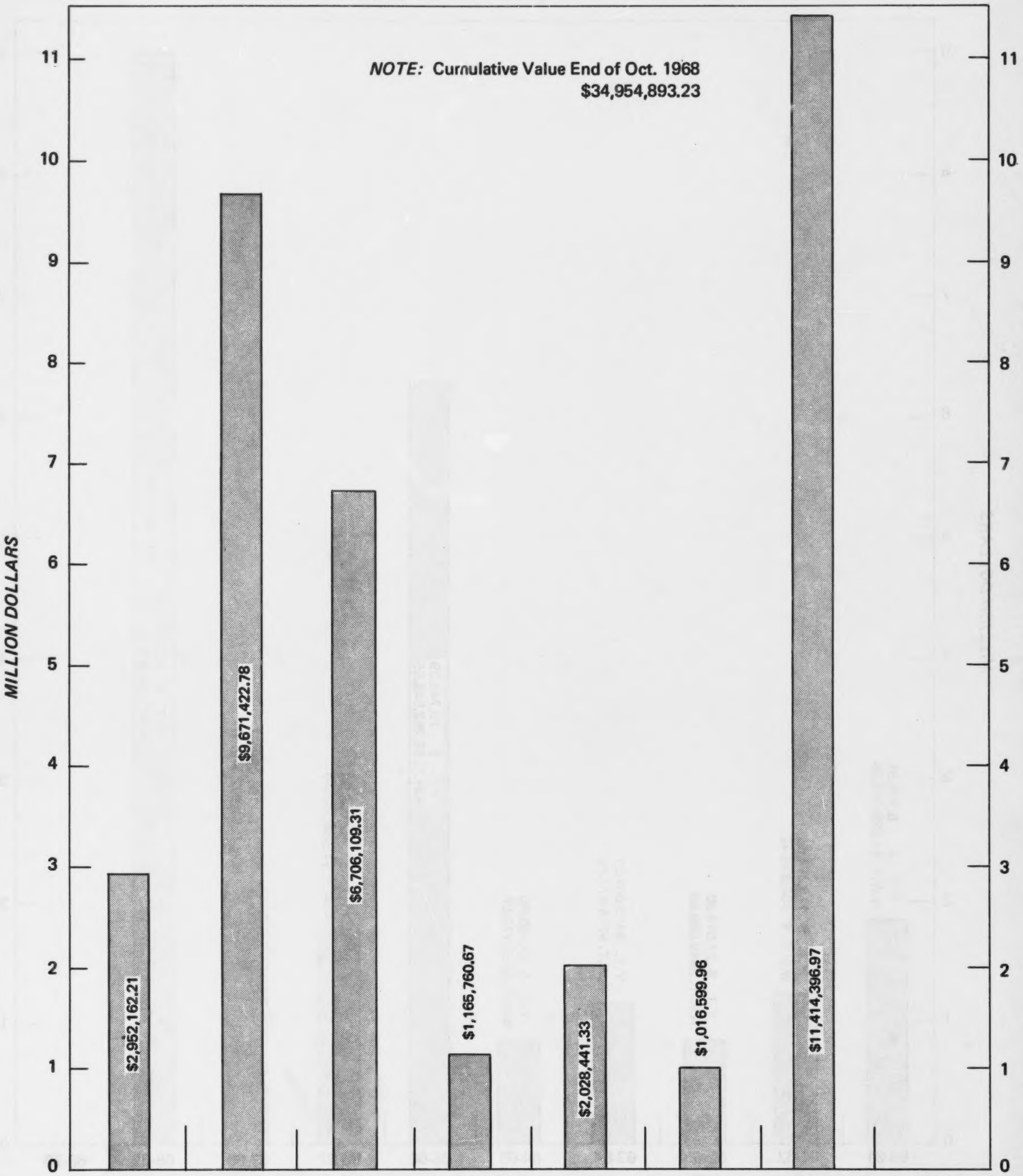
Northern Economic Development Branch

Figure 2 — Gross Revenue - Oil and Gas From Cash Bonus Bids, Fees, Forfeitures, Royalties, Rentals and Sale of Maps, Yukon Territory and Northwest Territories



Northern Economic Development Branch

Figure 3 — Value of Work Bonus Tenders, Yukon Territory and Northwest Territories



Oil and Gas Permits and Leases, December 31, 1968, Yukon Territory - Permits

Permits, numbered 619, acreage 26,376,093; Leases, numbered 55, acreage 186,092; total acreage 26,562,185.

Permits in the Mackenzie Bay contiguous to the Yukon are included in water permits and listed in the Northwest Territories section of this report.

Figure 4 shows the acreage held under permit on Canada Lands in northern Canada.

Table 1 - Oil & Gas Permits and Leases, Northwest Territories

Permits and Leases	Number	Acreage
N. W. T. - Mainland Permits	2,963	96,707,141
Arctic Islands Permits	3,892	188,358,592
Arctic Coast Permits	230	10,572,052
N. W. T. - Mainland Leases	299	1,999,901
Arctic Islands Leases	-	-
Arctic Coast Leases	-	-
Total	7,384	297,637,686

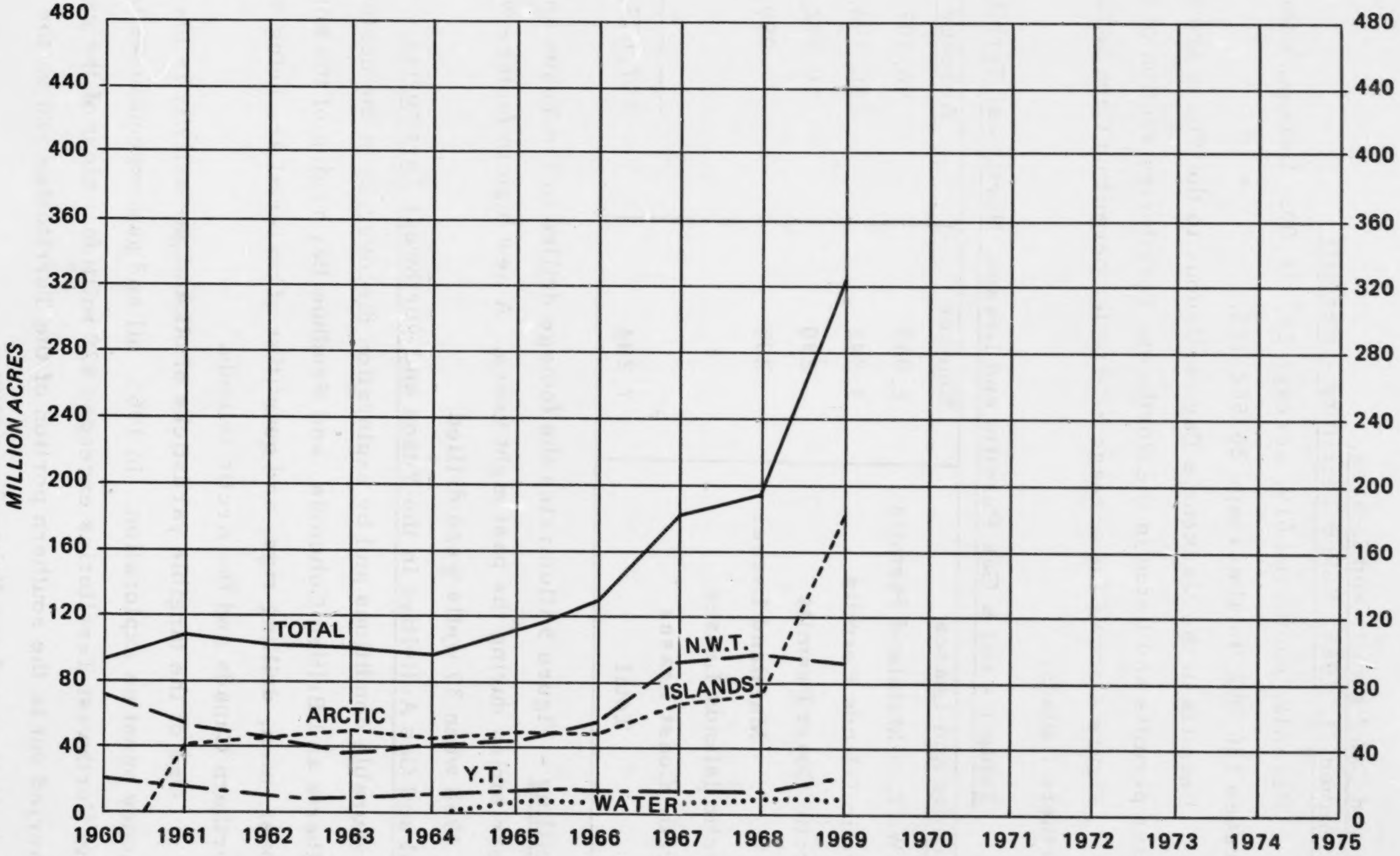
Drilling - Figure 5 illustrates the footage drilled in the Yukon and Northwest Territories during the past eight years. A new high in footage was established in 1968 when 39 wells were drilled.

Oil and Gas Activities in the Yukon and Northwest Territories - Encouraged by favourable conditions and by exploration discoveries in the northern areas of Alberta and British Columbia, and Prudhoe Bay region of the north Alaskan coast, men, drilling rigs, and quantities of material are being moved into northern Canada and the Arctic Islands.

One of the tangible yardsticks of oil and gas activity is the amount of money spent on exploration. In 1968, oil and gas expenditures in the Yukon and Northwest Territories exceeded $30 million. Most of the exploration was carried out in the southern portion of the Territories and on the Eagle Plain area in the northern Yukon Territory.

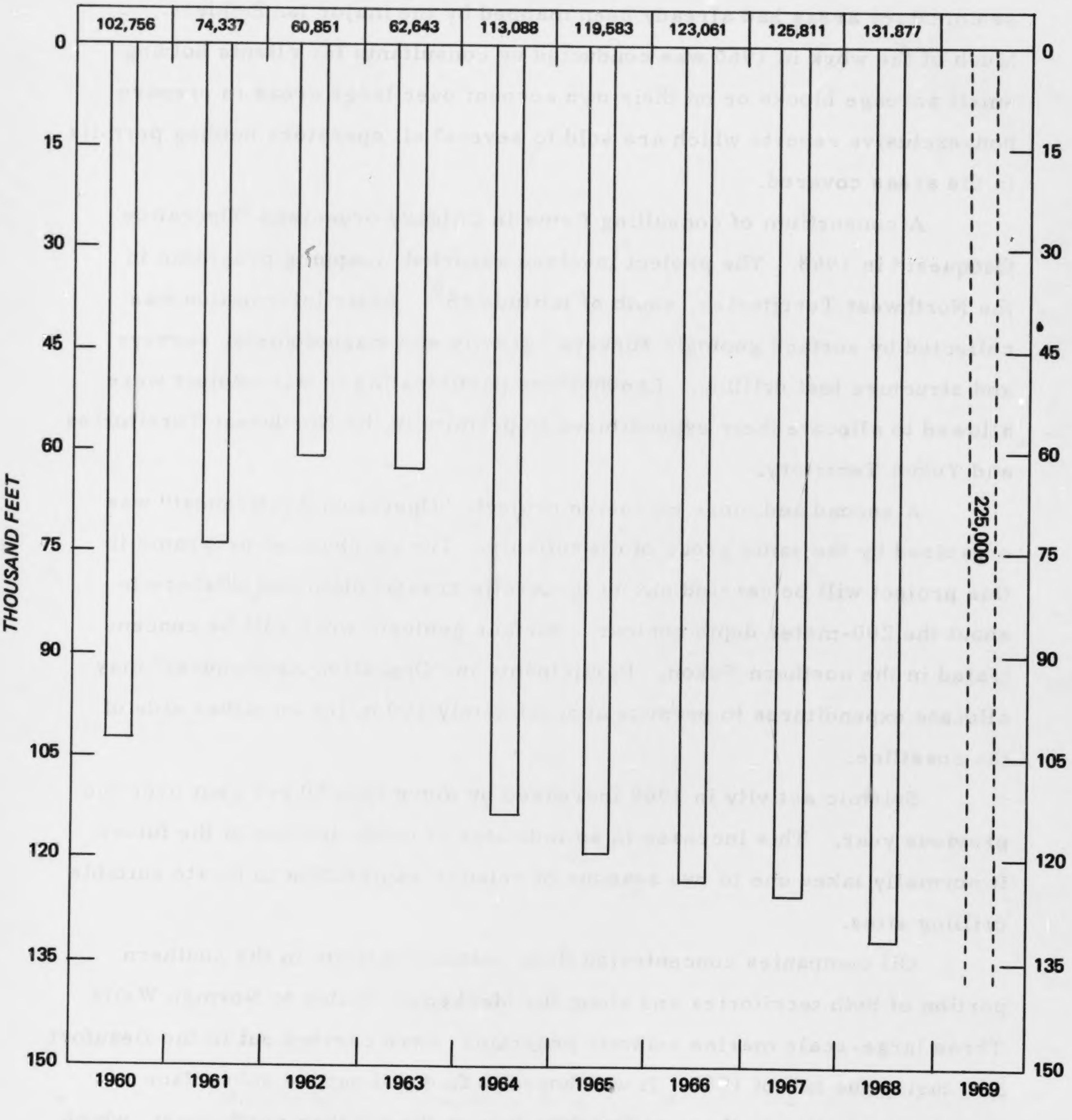
Northern Economic Development Branch

Figure 4 — Acreage held under Oil and Gas Permit, Yukon Territory and Northwest Territories



Northern Economic Development Branch

Figure 5 – Footage Drilled, Yukon Territory and Northwest Territories



Surface geological and photogeological surveys by the oil industry decreased in number compared with the previous year, since most of the sedimentary areas had already been mapped by the major landholders. Much of the work in 1960 was conducted by consultants for clients holding small acreage blocks or on their own account over large areas to prepare non-exclusive reports which are sold to several oil operators holding permits in the areas covered.

A consortium of consulting firms in Calgary organized "Operation Geoquest" in 1968. The project involved assorted mapping programs in the Northwest Territories, south of latitude 65°. Basic information was collected by surface geologic surveys, gravity and magnetometer surveys and structure test drilling. Landholders participating in this project were allowed to allocate their expenditures to permits in the Northwest Territories and Yukon Territory.

A second and more extensive project, "Operation Arcticquest" was organized by the same group of consultants. The geophysical programs in this project will be carried out on the Arctic coastal plain and offshore to about the 200-meter depth contour. Surface geologic work will be concentrated in the northern Yukon. Participants in "Operation Arcticquest" may allocate expenditures to permits approximately 100 miles on either side of the coastline.

Seismic activity in 1968 increased by more than 50 per cent over the previous year. This increase in an indicator of more drilling in the future; it normally takes one to two seasons of seismic exploration to locate suitable drilling sites.

Oil companies concentrated their seismic activity in the southern portion of both territories and along the Mackenzie Valley to Norman Wells. Three large-scale marine seismic programs were carried out in the Beaufort Sea during the fall of 1968. It was hoped to find and outline subsurface structures similar to those at Prudhoe Bay on the Alaskan north coast, which contain one of the world's great accumulations of oil.

On the mainland, Imperial Oil Enterprises continued to carry out large reflection seismic programs in the Delta and Tuktoyaktuk areas to locate sites for their 1969 exploration wells. To the east, Elf Exploration and Production Canada Limited continued a large geophysical program in the Anderson River-Liverpool Bay area.

Two wells were commenced in the area of the Mackenzie Delta by Imperial Oil, one in partnership with Shell Oil Canada and British American Oil Co. (now Gulf Oil Canada Ltd.). Both were scheduled for completion in the spring of 1969.

Two development oil wells were completed on Goose Island in the Norman Wells field. After stimulation, each well is now capable of producing up to 350 barrels of oil a day. A third well was drilled on the downdip edge of the field to initiate a secondary recovery program, and up to 15,000 barrels of water are being injected daily to maintain reservoir pressure and to increase production efficiency.

Westcoast Transmission Company and Pan American Petroleum Corporation signed a contract to make use of Pan American's partially developed gas reserves at Beaver River, three miles south of the Yukon Territory, and at Pointed Mountain in the southwest sector of the Northwest Territories, twenty miles north of the British Columbia Border. The Westcoast-Pan-American Gas Development contract covers the construction of a 20-inch gas pipeline to extend north for 110 miles from the present terminus of the Westcoast Transmission's pipeline at Fort Nelson to the Beaver River gas pool. Gas production is expected to begin early in the 1970's. Two gas wells were completed in the Pointed Mountain gas pool discovered in 1966, and a third well was nearing completion in the southern sector of the pool. The drilling of a fourth well in the northern sector was scheduled to begin in the spring of 1969.

The efforts of private industry and the Department of Indian Affairs and Northern Development on behalf of the Government of Canada to spur activity in the Arctic Islands were brought to fruition during 1968 by the creation of Panarctic Oils Ltd. The agreements signed by the participating companies and the Government on December 12, 1967, enabled a continuation of pioneer mineral exploration in the Arctic Islands. Panarctic Oils' initial financing involved $20.05 million, of which the Government will provide $9,022,500 for a 45 per cent equity and private capital will contribute $11,027,500 for a 55 per cent equity.

Government and corporations participate in equity on exactly the same terms. All original shareholders have comparable priority in providing additional capital when and if required. The Government, in addition, is owner of the mineral rights in the Arctic Islands and will receive its normal fees and rentals on exploration rights and royalties on production.

The Panarctic Corporation is, in some respects, comparable to the government-private co-ownership of such international oil firms as British Petroleums Ltd., and several French companies, e.g., Elf Oil Exploration and Production.

The Government of Canada has a very substantial direct equity and representation on the Board of Directors in the person of the Deputy Minister of the Department of Indian Affairs and Northern Development, but qualified technical and other experts engaged by those representing the private sector are responsible for day-to-day management. The Corporation competes with a host of non-government companies in its field, but has no special status because of Government ownership of part of its shares.

Panarctic Oils Ltd. acquired 49 million acres of oil and gas permits, exceeding 75 in number in the Arctic Islands, from companies and individuals. The company has assumed all the work obligations and will carry out a systematic program of exploration. Field exploration began in March 1968, when seismograph and gravity meter survey parties were flown to Melville Island.

Base camps with airstrips were set up at Winter Harbour, Marie Bay, Sherard Bay, and at Rea Point, all on Melville Island. Stockpiles of fuel and drilling supplies were established at Resolute Bay, Sherard Bay, and Rea Point.

The 1968 exploration program was completed at a cost of $4. 1 million. The work consisted of geological field work on the central Arctic Islands, gravity surveys on Bathurst Island, and intensive seismic and gravity work, totalling some 700 miles on northern Melville Island and Emerald Isle. The Melville Island program was instrumental in the selection of the two sites to be drilled in 1969.

The first wells in the Panarctic 17 well-drilling program of nine deep tests, six medium tests, and two shallow tests, are a 10, 000-foot test, Drake Point L-67, on the Sabine Peninsula in northeastern Melville Island, and a 6, 000-foot test, Sandy Point L-46, on northwestern Melville Island.

The Company's plans for 1969 also called for geophysical surveys to be carried out in the more northerly islands of the Queen Elizabeth Group. Drilling will follow these surveys to investigate subsurface anomalies outlined by the various geophysical tools.

Although the Arctic Islands permits cover petroleum and natural gas rights only, exploration will also be directed for sulphur, metallic minerals and other natural resources.

Oil and Gas Production and Conservation Act - The need for an Oil and Gas Production and Conservation Act to provide statutory authority for measures to prevent the waste of oil and gas and to provide for the safety of production operations in the north was first recognized by the Department early in 1960. Over the last seven years, work on the proposed Act has continued. This involved research into the nature of the matter to be included, obtaining approval of the basic policies to be expressed in the Act, and discussions with the Canadian Petroleum Association, the Chairman of the National Energy Board and his senior staff, and the Deputy Minister of the then Department of Mines and Technical Surveys, and his senior staff. Bill S-29 "An Act respecting the production and conservation of oil and gas in the Yukon Territory and the Northwest Territories" was prepared for submission to the Senate and House of Commons in 1969.

Mining

The Mining Section is responsible for the disposition of mineral rights located on Crown lands in the Yukon Territory and Northwest Territories. The provisions of the Yukon Quartz Mining Act and Placer Mining Act and the Canada Mining Regulations are the Section's authorities for administering the mineral rights.

The Section maintains a system of files, books of records, and a claim map system. Consistent with the duties of administration, the Territories are divided into seven mining districts, four in the Yukon and three in the Northwest Territories. All mineral claims staked in the Territories must be recorded in the Mining Recorder's office of the Mining District in which the claim has been staked. These offices recorded a total of 52,892 mineral claims during 1968. On behalf of the Northwest Territories, the Mining Section administers the granting of prospecting permits. Such a permit gives the holder exclusive rights to prospect for minerals within the permit area for three years. In March 1969, 103 such permits were issued, the majority of which were within the Keewatin District of the Northwest Territories. Interest in uranium created the demand for permits.

The Mining Section is responsible for the administration of safety legislation in the Territories, covering all aspects of mining, i. e., working conditions in mines, radiation hazards, air and water pollution, and the keeping of statistical records on accidents and accident prevention.

There are two field offices headed by mining engineers and staffed with technical personnel: one in the Yukon at Whitehorse, and one in the Northwest Territories at Yellowknife. The Section carries out mineral claim inspections, mine rescue training, and is responsible for the upkeep of mine rescue equipment and assay services in the Territories.

The Department, in co-operation with industry, sponsored the attendance of mine rescue teams for the Yukon and Northwest Territories at the second Canadian Mine Rescue Championships held in Penticton, British Columbia, in June 1968.

During the year, additional Draeger B. G. 174, 4-hour oxygen-breathing units were purchased. Both the Yukon Territory and Northwest

Territories are now equipped with these up-to-date units - 36 in the Yukon Territory and 24 in the Northwest Territories.

All essential arrangements were made by the end of the fiscal year for the Department officially to take over responsibility of operating two geological field offices, one in Yellowknife and one in Whitehorse as of April 1, 1969. These offices are headed by geologists and offer a geological service to the mining industry both for exploration purposes and operating mines.

The Section carries out property examinations and is responsible for evaluation of assistance programs and activity reports.

The Section also administers the Prospector's Assistance Program. There were 30 prospectors in the Yukon Territory and 54 in the Northwest Territories eligible to receive assistance under this program in 1968.

Mining in the Yukon Territory

Production - The value of mineral production in the Yukon Territory increased by $8. 5 million over the 1967 figure. This increase was due to the Clinton Creek asbestos mine coming into full production.

Two new small mines reached the production stage in August and September, namely Arctic Gold and Silver Mines, and Mount Nansen Mines Ltd. : both properties have had problems in milling circuits and the former had to close its mill temporarily for alterations at the year's end.

Pertinent details of producing mines, relating to location, product, rate of production, grade of ore, reserves, and the number of employees, are set out in the following pages.

United Keno Hill Mines

Location	26 miles northeast of Mayo
Product	Silver, lead-zinc, cadmium
Rate of production	154 tons of ore daily (1968)
Grade	38. 6 oz. silver, 7. 5 per cent lead, 6. 5 per cent zinc
Reserves	100, 230 tons
Employees	260

Cassiar Asbestos Corporation Ltd.

Location	65 miles northwest Dawson
Product	Asbestos fibre
Rate of production	2, 348 tons of ore daily (1968)
Grade	6. 7 per cent 1/16 - 1 1/8" fibre
Reserves	25, 000, 000 tons
Employees	263

New Imperial Mines

Location	7 miles southwest of Whitehorse
Product	Copper
Rate of production	2, 000 tons of ore daily (1968)
Grade	1.15 per cent copper
Reserves	4, 590, 000 tons open pit; 5, 000, 000 tons underground graded at 2 per cent
Employees	161

Arctic Gold and Silver Mines

Location	8 miles south of Carcross
Product	gold, silver, lead, zinc
Rate of Production	100 tons of ore daily
Grade	0. 52 oz. gold and 14. 4 oz. silver
Reserves	37, 870 tons
Employees	61

Mount Nansen Mines Ltd.

Location	45 miles west of Carmacks
Product	gold, silver
Rate of production	250 tons of ore daily
Grade	0.50 oz. gold, 18.0 oz. silver
Reserves	330,000 tons
Employees	60

Exploration and Development - The economic impact from the development and Anvil Mine and the resulting improvements in transportation, communication, and long-term business stability in changing the nature of mining exploration. Mining companies are planning longer exploration programs and are establishing field exploration offices in the Yukon Territory.

There were 8,354 mineral claims recorded in the Yukon Territory in 1968, an increase of 988 over 1967. The exploration programs were substantial in nature and included diamond drilling and underground development. The properties on which exploration took place were on deposits of silver-lead, gold-silver, copper, lead-zinc, tungsten, and nickel-copper. Two small mines went into production during the year and two other mines were preparing for production late in 1969. Details of the more important programs are set out below.

Anvil Mining Corporation Ltd. - Construction and development of the $63 million project continued on schedule. The first shipment of concentrates was planned to take place in September 1969. Anvil Mining Corporation Ltd. will sell its production of lead and zinc concentrates to two Japanese companies Under an eight-year agreement the 368,400 short tons of the concentrates will go to Toho Zinc Co. Ltd., and Mitsui Mining and Smelting Co. Ltd. Ore reserves at the Anvil Mine are estimated at 63.5 million tons averaging 3.40 per cent lead and 5.72 per cent zinc with just over one ounce of silver per ton.

Concentrates will be shipped in containers via road and railroad to Skagway for trans-shipment to Japan. The Whitepass and Yukon Route is proceeding with its 14-million dollar program of improving the 110-mile railway between Whitehorse and Skagway, and the construction of a bulk-loading facility at the latter port. The Townsite of Faro, 12 miles from the mine, will be served by the same transmission line that brings power to the mine from the Northern Canada Power Commission's Whitehorse power plant.

Venus Mines Ltd.* has completed a program of underground exploration work on Montana Mountain and is now concentrating on doing exploration and development work to bring its mine into production in 1969.

Hudson's Bay Mining and Smelting Company continued a drilling and exploration program on 144 leased mineral claims in the MacMillian Pass area near the border between the Yukon and Northwest Territories. The property is a lead-zinc prospect and 10, 470, 000 tons of mineralization were indicated in 1953. The work carried out in 1968 increased this tonnage. There were 50 men and three drills on the property. Prospecting in the outlying area was carried out by five prospecting parties.

Atlas Explorations Ltd.* conducted a primary exploration program in the area north of the South MacMillian River and found silver-lead mineralization in the Mount Selous area. This company, jointly with Mitsui Mining and Smelting Co. Ltd., carried out a drilling program on a mineralized zone on the "Pay" group of claims east of Ross River. The first program was eligible to receive assistance under the Northern Mineral Assistance Program.

Kerr Addison Mines Ltd., the first company to discover ore in the Ross River area, has two ore zones and has outlined approximately 15 million tons of lead-zinc ore. This company diamond-drilled two holes on the Vangorda ore body for metallurgical purposes and carried out a geochemical program in 1968.

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*Companies eligible for assistance under Northern Mineral Assistance Program

Cominco carried out a diamond drilling program on a claim group near Swim Lake in the Anvil-Vangorda area.

New Imperial Mines continued a program of exploration by diamond drilling copper mineralization on its claims in the Whitehorse Copperbelt. Surface drilling and geophysical surveys indicate that both tonnage and grade are increasing as the copper deposits are tested to depth.

United Keno Hill Mines Ltd. carried out exploration work in several locations on Galena Hill, Mount Hinton, and Keno Hill. The results were successful and an underground rehabilitation program was conducted at the Sadie-Ladue Mine on Keno Hill and a shaft sinking program carried out on the Husky Claim on Galena Hill. The mine officials are quite confident about continuing operations in the district.

Hart River Mines Ltd. carried out diamond drilling, mapping and geophysical surveys on a copper prospect 80 miles northeast of Dawson City. The Company announced plans to spend $500,000 on an exploration program which included underground development and a winter road from the Dempster Highway.

Discovery Mines Ltd. completed their drilling program in the nickel-copper showing at White River and were disappointed with the results of the work to date.

Hudson's Bay Mining and Smelting carried out a prospecting program on another nickel-copper property at Quill Creek south of the White River and some success was reported.

Arrow-Inter America Corporation carried out an underground exploration program on 46 claims optioned from Foley Silver Mines in the Stand-to-Hill area of the Mayo Mining District.

Cyprus Exploration Corporation Ltd. did bulldozer trenching on copper mineralization at the south end of Fairchild Lake, 124 miles northeast of Mayo.

Newmont Mining Corporation Ltd. carried out regional stream sediment sampling, geological mapping, and airborne geophysical surveys in the Nadales River area.

Spartan Exploration Ltd * carried out a general prospecting program in the eastern central portion of the Yukon.

Amax Exploration, a wholly-owned subsidiary of America Metals, carried out geological mapping and a diamond drilling program on a tungsten property 4 miles northwest of the Old Canol Road at MacMillian Pass. The property straddles the Yukon-Northwest Territories border.

Stump Mines Ltd. * and Silver Key Mines completed several underground exploration adits and carried out bulldozer stripping, trenching, diamond drilling, and geochemical surveys on silver-lead showings. Results of this work have been encouraging and work will continue.

Silver City Mines Ltd. reported a successful drilling program late in the season. United Pemetex did have the property under option, but the work is being done by Silver City. The property consists of 186 claims covering high-grade copper mineralization in the area of the upper White River Canyon.

Other companies carrying out exploratory work throughout the Yukon Territory during 1967 were Canada Tungsten Mining Corporation; Casino Silver Mines Ltd. ; Jason Explorers Ltd. *; Bonnet Plume Mines Ltd. *; Jackpot Copper Mines Ltd. *; Silver Spring Mines Ltd. ; Canol Mines Ltd. ; Fort George Mining; Boswell River Mines Ltd. *; Connaught Mines Ltd. ; Trans-Yukon Ltd. *; Geo-photo Services Ltd. ; Tintina Silver Mines; Mount Grant Mines*; Northern Empire Mines; Yukon Revenue Mines; MacIntyre Porcupine Mines Ltd. ; General Enterprises; Oregon Syndicate; Fort Reliance Minerals Ltd.

Mining in the Northwest Territories

Production - There was an increase of nearly $9 million in the value of mineral production in the Northwest Territories. This increase was largely due to resumption of production by Canada Tungsten after rebuilding its mill and crushing plant in December 1967. Echo Bay Mines also helped by increasing the silver production by 2 million ounces.

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*Companies eligible for assistance under Northern Mineral Assistance Program

Tundra Gold Mines shut down in February 1968. Discovery Mines announced that it did not have enough ore reserves to continue production through 1969 and ceased operations.

Pine Point Mines completed its construction of the addition to its concentrator to increase the milling capacity to 8, 000 tons per day. The additional capacity is for the treatment of ore mined from the Pyramid ore body which the company acquired by purchase in 1966. The last high-grade shipping ore was mined out late in the year. However, the new ore from Pyramid will allow the company to maintain its total metal production.

Echo Bay Mines Ltd. on Great Bear Lake continued to be the chief producer of silver and copper and is able to maintain its production by the development of new high-grade deposits. The company plans extension of its underground workings from an internal shaft. Uranium in the form of pitchblende has been found and the company is presently studying the feasibility of reclaiming this product.

The three producing golds mines, Giant Yellowknife Mines, Con-Rycon-Vol Mines and Discovery Mines continued operating throughout the year. There was a decrease in gold production due to a labour shortage and a decrease in profits due to increased costs and the loss of one mine. Canada Tungsten Mining Corporation resumed milling and mining operations in 1968 at an increased rate. Construction in 1967 replaced the mill lost by fire a year earlier.

Pertinent details of the producing mines are as follows:

Con-Rycon-Vol Mines

Location	1. 5 miles south of Yellowknife
Product	Gold
Rate of production	525 tons daily (1968)
Grade	0. 71 oz. of gold per ton
Reserves	not available
Employees	225

Giant Yellowknife Mines Ltd.

Location	1. 5 miles north of Yellowknife
Product	Gold
Rate of production	800 tons daily (1968)
Grade	0. 71 oz. of gold per ton
Reserves	1, 628, 500 tons
Employees	350

Supercrest Mines Ltd. *

Location	1. 5 Miles north of Yellowknife
Product	Gold
Rate of production	100 tons daily
Grade	0. 71 ozs. per ton
Reserves	260, 000 tons
Employees	Operated by Giant

Lolar Mines Ltd. *

Location	1. 5 miles north of Yellowknife
Product	Gold
Rate of production	100 tons daily
Grade	0. 67 ozs. per day
Reserves	324, 000 tons
Employees	Operated by Giant

Discovery Mines Ltd.

Location	50 miles north of Yellowknife
Product	Gold
Rate of production	225 tons daily
Grade	1. 86 ozs. per ton
Reserves	Nil (production ending in 1969)
Employees	80

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* Extensions of Giant Yellowknife Mines Ltd. workings

Pine Point Mines Ltd.

Location	South shore of Great Slave Lake
Product	Lead-zinc
Rate of production	8, 000 tons daily
Grade	9.4 per cent combined lead and zinc
Reserves	40, 500, 000 tons
Employees	328

High-grade ore shipped to the Consolidated Mining and Smelting Company smelters, at Trail, British Columbia. Lead-zinc concentrates shipped to Japan, the United States, and India.

Echo Bay Mines Ltd.

Location	Great Bear Lake
Product	Silver-copper
Rate of production	100 tons daily
Grade	76 ozs. per ton silver, 2 per cent copper
Reserves	Not available
Employees	87

Concentrates are shipped by barge, winter road, and aircraft from the property to railhead at Hay River for trans-shipment to smelters.

Canada Tungsten Mining Corporation

Location	125 miles north of Watson Lake
Product	Tungsten-copper concentrates
Rate of production	350 tons daily (1968)
Grade	1, 71 per cent WO_3 and 0.45 per cent copper
Reserves	934, 000 tons
Employees	70

Exploration and Development - The Northwest Territories has experienced one of the most active prospecting seasons in many years. Major mineral exploration took place in five different areas: Coppermine River; Pine Point;

Victoria Island; Artillery Lake; and the Camsel River area.

During the latter part of 1968, a great deal of interest was shown in uranium prospects in the Keewatin District and in the iron ore prospects on Baffin Island and the Melville Peninsula. Permits were granted and claims were recorded to cover sulphur prospects in the Arctic Islands. Increased activity can be gauged by the fact that 44, 489 claims were recorded in the Territories and compared to 28, 622 mineral claims in 1967. These areas are discussed in the following paragraphs.

Coppermine River Area - The estimated expenditures in the Coppermine River area by exploration companies was $4 million in 1968. There are a number of mineral showings reported by mining companies but these vary as to type, size, and grade. Coppermine River Limited is the only company to announce that it had drilled and proven another one million tons of copper ore in the 47 zone deposit. Estimated reserves for this deposit are 4, 000, 000 tons at 3 per cent copper.

Bernack Coppermine Exploration and Rose Pass Mines have indicated that they may have significant mineralization. Other mining companies and individuals that performed exploration work in the area include the following:

Clero Mines Ltd. *, Conwest Exploration Co. Ltd. ; East Coppermine Exploration; Canadian Goldale Mining Corp. ; Canadian Lencourt Mines; Northville Explorations; Earlcrest Resources Ltd. ; Agassiz Mines Ltd. ; General Resources Ltd. ; Lake Beaverhouse Mining Ltd. ; Nordic Exploration; James Bay Mining Corp. ; Braemac Mines Ltd. ; Croydon Mines; Madrona Explorations Co. Ltd. ; Armore Mines Ltd. ; P. C. E. Explorations; United Buffadison Mines Ltd. *; Quadrate Explorations Ltd. *; New Cronin Babine Mines Ltd. ; Canadore Mining & Development Corp. *; Rose Pass Mines*; Komo Explorations; Adera Mining; Huntec; Teshierpi Mines; Willow Lake Mines Ltd. *; Ramid Resources Ltd. *; Coronation Gulf Mines Ltd. ; Janus Explorations*; Hearne Coppermine Ltd. *; Magnum Consolidated Mining Co. ; Continental McKeeney; Univex Mining Corp. Ltd. ; Territories Copper Mines ;

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* Companies eligible for assistance under Northern Mineral Assistance Program

Torwest Mines Ltd.; Rodstron Yellowknife; Continental Potash Corp.; Spectoair; Homestake Silver Ltd.; United Keno Explorations; Cassino Silver Mines Ltd.; Columbia Placers Ltd.; N.W.T. Coppermines Ltd.; and Tower Mines Ltd.

In the Hope Bay-Bathurst Inlet area on the Arctic coast several companies including the Hope Bay Syndicate are doing preliminary exploration on gold-silver prospects.

Victoria Island - The Muskox Syndicate and Grandroy Mines carried out primary exploration on the northwest sector of Victoria Island. Preliminary reports indicate that further work will be done in 1969.

Camsel River Area - Terra Mining and Exploration Company Ltd., a wholly-owned subsidiary of Silver Bear Mines holds 24 claims on a silver-copper-bismuth property at Rainey Lake. Work during 1968 consisted of driving an inclined tunnel for 12,000 feet and outlining ore reserves. The company announced plans to bring this property into production in 1969, and plan to move in mill equipment during the winter of 1969.

Silver Bay Mines Ltd. carried out a re-examination of the old Camsel River Silver Mines property on the Camsel River, two and one-half miles southeast of the Terra property. Underground drifting and raising were done.

Caesar Silver Mines Ltd., and Jason Explorers carried out exploratory work in the same area.

Pine Point Area - Buffalo River Explorations Ltd., a company owned by Conwest, New Connex, and Canadian Exploration Ltd., has done feasibility studies on its Pine Point property. The deposit is reported to contain 1,400,000 tons of ore grading 13 per cent lead-zinc.

Yellowknife Bear Metals continued drilling of its lead-zinc property.

Coronet Mines announced plans to drill to increase reserves on its lead-zinc deposits in the Pine Point area. Pas drilling has indicated 1,000,000 tons of ore grading 13.2 per cent lead-zinc.

Artillery Lake Area - What appears to be a new nickel mineralized area is being explored by Newmont Mining Corporation. A prospecting program in 1968 in the Artillery Lake area, 250 miles east of Yellowknife, resulted in the company staking 800 claims. Newmont has reported its findings as minor indications of nickel mineral, but definetely not ore at this stage. Other mining exploration companies and speculators are staking ground in the area, and it is believed that by the year-end of 1968, over 8,000 claims were recorded.

Newmont had become interested in the area following publication of maps of an aeromagnetic survey covering the region. These maps show a number of magnetic anomalies that appear to be associated with the occurrence of ultrabasic rocks in the area. At this early stage, there are indications that the geology may be similar to that of the Thompson-Manitoba Nickel Belt. It will take much more time and work to assess this comparison conclusively.

Keewatin Area - The Eastern Mackenzie Syndicate has located several interesting radio-active zones in the Ellice River area as a result of a 1968 exploration program. The prospecting was carried out on permits and claims.

Selco Northern Limited carried out a drilling and geological mapping program on a gold property at Eric Lake. This company carried out an exploration program on a prospecting permit in the same area.

Hudson's Bay Exploration and Development Ltd. carried out a drilling program on a property southeast of Baker Lake. N.H. Ursel Associates investigated iron formations covered by two prospecting permits on the Melville Peninsula.

Late in 1968, two large staking programs occurred: one in the Keewatin District and the second on a magnetic anomaly associated with iron formations on Baffin Island. The two companies are Denison Mines Limited and Patino Mining Corporation respectively.

Development Analysis

The Development Analysis Section reports on matters concerning the technical evaluation of applications for assistance in road and airstrip construction, and the setting of priorities and amounts of financial assistance be granted to such applications. It also administers the Northern Mineral Exploration Program which provides financial incentives to stimulate the number, pace and intensity of mineral activity in the Yukon and Northwest Territories. Descriptions of the various incentive programs and the amounts of the financial assistance awarded under their regulations for the year 1968, are set out as follows:

The Northern Roads Program is a ten-year $100-million program designed to provide roads which connect centres of population, lateral roads through areas of favourable resource potential and roads to specific resource development projects. During the year, approximately $10. 3 million was spent on roads in the Yukon Territory and Northwest Territories for a total of 119 miles of new and reconstructed roads.

The Tote Trail Program is administered by both the Territorial governments, and approximately $166, 560 were provided for assistance in the construction of lower-standard roads to resource projects.

The Northern Resource Airports Program provides financial assistance on a cost-sharing basis for the construction of airports intended to provide access to resource exploration and development projects. Departmental expenditures for this purpose during the year were approximately $9, 332.

The Northern Mineral Exploration Program - Applications for grants under this program have been received for 75 individual programs of mineral and oil exploration. Financial assistance and commitments of assistance amount to $3, 054, 000 for the year to assist 29 approved programs. A further commitment has been made to provide up to $4 million in the current year for a large oil and gas exploration program in the Arctic Islands.

Financial and engineering evaluations were carried out on several mining developments where assistance for the construction of access roads was requested by the companies concerned.

The following tables show preliminary production figures for 1968 and the comparative figures for 1967 for the Yukon Territory and the Northwest Territories:

Northern Economic Development Branch

Table 2 - Production Figures, Minerals, Yukon

Mineral	1967		1968	
	Quantity	Value (dollars)	Quantity	Value (dollars)
Gold	17,900 oz.	675,725	24,957 oz.	941,128
Silver	3,869,374 oz.	6,701,756	2,061,534 oz.	4,778,635
Lead	15,299,709 lbs.	2,141,959	7,034,890 lbs.	951,117
Copper	7,167,919 lbs.	3,409,779	11,965,800 lbs.	5,755,550
Coal	1,912 tons	15,791	--	--
Zinc	9,476,545 lbs.	1,373,151	4,860,000 lbs.	685,260
Cadmium	94,999 lbs.	265,997	50,750 lbs.	144,638
Asbestos	2,260 tons	406,371	64,000 tons	10,240,000
Totals		14,990,529		23,496,328

Table 3 - Production Figures, Minerals, Northwest Territories

Mineral	1967		1968	
	Quantity	Value (dollars)	Quantity	Value (dollars)
Gold	380,304 oz.	14,356,476	347,012 oz.	13,085,822
Silver	1,980,228 oz.	3,429,755	3,855,967 oz.	8,938,132
Copper	1,131,126 lbs.	538,077	2,097,800 lbs.	946,108
Lead	254,753,820 lbs.	35,665,535	260,000,000 lbs.	35,152,000
Zinc	419,964,800 lbs.	60,852,900	430,000,000 lbs.	60,630,000
Cadmium	911,400 lbs.	2,551,920	900,000 lbs.	2,565,000
Totals		117,394,663		121,317,062

Other Developments - An agreement, negotiated with a large Yukon base-metal mining operation and scheduled for production at the end of 1969, provides government assistance to the mine for access roads and bridges, electric power, communications and to townsite facilities. The company agreed to employ specified numbers of qualified local residents and, subject to certain conditions relating to profitability, to construct and put into operation a smelter within eight years of commencing production.

Indian Minerals

The Indian Minerals Section is responsible for managing and developing the mineral resources of Indian reserves in co-operation with Indian Band Councils, and for initiating training courses for the employment of Indians in the mineral industries. The program is carried out by professional and administrative personnel from two offices, the Ottawa office covering eastern Canada, and the Calgary office for the four western provinces.

Oil and Gas

Oil and Gas resources, which are developed through leasing to non-Indians under the Indian Oil and Gas Regulations, continue to provide major revenues for Indian Bands in Alberta. Bands in other western provinces and in Ontario also receive revenues from these resources. Oil and gas royalties amounted to $2, 423, 174. 08, bonuses to $573, 763. 93, and rentals to $1, 281, 857. 49 for a total of $4, 278, 795. 50. Royalties and rentals reached record peaks, but bonuses were reduced from the previous year. The oil and gas rights, with the better potential, have been disposed of, and until there are major discoveries on or near the Indian reserves bonus revenue will continue to be modest.

Two million acres of Indian oil and gas rights are now under contract, comprised of 598 leases and 65 permits. Another one million acres has a petroleum potential and is available for disposal. Exploratory work continued to be active: 22 wells and 39 geophysical surveys were completed during the year. In addition, nine structure test-holes were drilled.

A number of productive leases have completed their primary terms, and are being renewed at higher scales of royalties. It is expected that royalties will continue to increase during the next few years, as a result of the higher royalty scales, as well as new production. There were no significant new discoveries of oil or gas.

The Indian people have had increased opportunities to consult on petroleum matters affecting their lands, through Band Council meetings, regional workshops, and the first National Minerals Conference held in May 1968. The Indian Minerals office has provided, in answer to requests from Band Councils, more oil and gas revenue estimates for preparation of Band budgets.

An oil company which has conducted production tests on the bituminous sands of the Gregoire Lake Reserve for the past five years, applied to the Alberta government for an expanded program of production to an American market. However, the application has been deferred for a year pending clarification of the market potential for bituminous sand oil. Should this production program proceed, it will be the first commercial in situ production from the Athabasca tar sands.

The production testing of the heavy oil occurrence on the Cold Lake Reserve received a severe setback when a fire partially destroyed the plant and production facilities.

Mining

Mining resources of the Indian reserves, for many years left under-developed, are now receiving increasing attention. This has been largely due to change in policy for disposing of mining rights, and to the increasing interest of Band Councils in the development of the minerals.

New Indian Mining Regulations, P.C. 1968-1865, provide for Indian Band Councils to negotiate mining contracts with developers, as an alternate to disposal by public tender. Other changes are: a reduced standard rate of acreage rentals for mining permits; deletion of the Canadian qualification requirement for mining leases; broader allowances for the grouping of permits and leases for development; greater flexibility in setting rates for rental, royalty and assessment work. During the last few months of the year, the Mississaugi, Fort Hope, and Garden River Band Councils of northwestern Ontario negotiated new mining contracts for their lands with mine developers.

In British Columbia there were two developments of interest. One company took up placer mining rights to the lands of the Mount Curry Band at Lillooet Lake. The agreement with the mining company was the result of several negotiating meetings with the Mount Curry Band and will provide revenues and employment for the Indians if the venture proves profitable. Another, the Cook's Ferry Band, formed its own company to develop the mineral resources of its lands in the Highland Valley copper camp. Progress was made in matters of incorporation, financing, evaluating and negotiating a development agreement with a major mining company. This venture was hampered by problems arising out of the provincial control of mineral rights on Indian reserves in British Columbia.

The development of the mining resources in western Canada was assisted by the appointment of a new geological engineer. Programs include evaluation of the mining potential fo the reserves, and training of Indian people for employment in the mining industry. A drilling training program concluded last winter in co-operation with ARDA and other government agencies has resulted in the full-time employment of 25 Indian people in drilling operations in northern Manitoba. Prospecting training has been carried out among Indians in Ontario, British Columbia, and the Yukon Territory.

Water, Forests and Land

Water Resources

Policy- To manage territorial water resources in the best interest of the region; in particular to ensure the orderly development and utilization of water in an expanding northern economy. To accomplish this broad objective, to institute a system of water rights and pollution control and to carry out surveys of and research into territorial water resources.

Programs - (Northern Water Rights Act) Following Cabinet approval, work proceeded in the drafting of a Northern Water Rights Act to provide legislative authority for managing the use of northern water and to control water pollution.

Northern Research Basins - A program of research into northern water has been initiated. It is intended to establish four experimental research basins in the north, with the primary objective of studying land-use hydrology in locations representative of areas of current or anticipated large-scale development activity. This work will be closely allied to northern resource conservation programs. The University of Saskatchewan began a study to select the optimum location for one research basin each in the lower Mackenzie River area, the upper Liard River watershed (Yukon Territory) and the lower Liard River watershed (Northwest Territories). Université Laval undertook an identical study in the Dubawn-Kazan Rivers watershed.

Hydro-electric Power Survey - A survey of hydro-electric power potential in the Central Mackenzie District was conducted during 1968-69. The Coppermine River watershed and a region between Great Slave Lake and the 60th parallel were investigated. The lower 50-mile reach of the Coppermine River and the lower 20-mile reach of the Lockhart River are particularly well suited for hydro-electric power development.

Yukon Power Study - The Water Resources Section has participated in the joint Canada-United States study of the potential market for the power that could be made available from possible hydro-electric developments in the Upper Yukon watershed.

Dominion Water Power Act - The responsibility for administering the Dominion Water Power Act and Regulations for the Department was carried out by the Section.

Hydrometric Survey - More hydrometric stations are required in the Territories. The Water Resources Section arranged for the transfer of funds from this Department to the Department of Energy, Mines and Resources to assist the Water Survey of Canada in a program to construct and maintain new northern stations. Part of these funds will be used for water-quality sampling and sediment surveys.

Staff - A position of water administrator was filled in March 1969. At present, the Water Resources Section consists of a Section head, water administrator, and stenographer. A position of hydrologist was approved for filling in 1969. Pending the authorization of the Northern Water Rights legislation plans were made to add a staff member responsible for water quality and pollution control, a regional engineer in Whitehorse and another regional engineer in Yellowknife.

Forestry

During 1968, a new timber harvesting policy was adopted. Operators will now be able to obtain cutting rights to large tracts of timber for periods of five or ten years, with provision for agreement renewal. A guaranteed supply of wood on a long-term basis will provide justification for companies' investments in large, expensive conversion plants.

This new policy has already resulted in the establishment of four timber management areas in the Yukon Territory, each of which will have an average yearly production of 10 million board feet within five years. Further agreements covering the remainder of the merchantable timber in the Yukon Territory and Northwest Territories are pending.

Yukon Forest Service- The Yukon Territory experienced a relatively moderate fire season in 1968 with the exception of a short critical period during mid-July In the protected area, 77 fires burned 18, 619 acres. Lightning accounted for only 9 per cent of the fires in the protected area and of the total number of fires, 84 per cent were less than 10 acres in size. Children and campfires continued to be the major fire cause. In the non-protected area, 9 known fires burned an estimated 15, 000 acres,but no suppression action was taken.

Timber production during the fiscal year included 7, 680, 707 feet board measure of lumber, 1, 150, 690 lineal feet of timber (used almost exclusively by the mining industry) and 10, 080 cords of fuelwood. Royalties of $9, 686 were received from sale of this timber.

The Yukon Forest Service administered 43 campgrounds in 1968.

Mackenzie Forest Service- The Northwest Territories also experienced a relatively mild fire season during 1968, although the fire hazard remained high throughout the summer on that portion of the protected zone lying north of Wrigley.

Eighty fires burned 304, 050 acres in the protected zone and a further 39 fires damaged an estimated 262, 900 acres in the non-protected zone. Of this total loss, however, fifteen fires accounted for 99 per cent of the total area. The Inuvik District alone accounted for 35 per cent of the total number of fires and 97 per cent of the total area burned.

Timber production during the fiscal year was as follows: 2, 736, 000 feet board measure of lumber; 128, 500 lineal feet of timber (used for poles and mine timber) and 4, 000 cords of firewood. The harvest resulted in royalties of $2, 800.

The Mackenzie Forest Service maintained a total of 17 campgrounds in 1968.

Plans for 1969-1970 - Current high timber prices, combined with a heavy demand for forest products in other areas of Canada, resulted in a sudden increase in demand for northern timber. It was evident, however, that before further large tracts of timber are allotted to forest companies, a careful assessment of the resource's potential will be required. Forest inventory and feasibility studies will be conducted in 1969 on the Lower Liard area of the Northwest Territories, the south central portion of the Yukon and the Upper Liard River basin in the Yukon Territory. Further studies will be carried out.

The increase in industrial activity in the north has made evident the need for a change in the regulations governing the use of renewable resources. The Territorial Timber Regulations will be revised and new land-use regulations will be developed to reduce needless destruction of renewable resources and the northern environment.

Land Management

The Land Management Service has administrative responsibility for all unalienated Crown lands in the Yukon Territory and Northwest Territories, excepting such areas as have been transferred to the administration, management, and control of other federal departments or the respective territorial governments. These lands may be leased, sold, or otherwise disposed of, pursuant to the provisions of the Territorial Lands Act and Regulations.

The Section also administers approximately 3, 000 parcels of land at various locations throughout southern Canada, and they may also be leased, sold, or otherwise disposed of, in accordance with the terms of the public Lands Grants Act and Regulations. Another function is to act on behalf of other Branches of the Department in the acquisition and disposal of surplus properties, and it also co-ordinates submissions covering departmental lands and buildings for reports to the Real Property Inventory maintained by the Public Works Department.

A special Dominion Lands Unit maintains records covering the disposal of more than one million properties in western Canada between 1873 and 1930 by homestead, pre-emption, métis scrip, military bounty, railway subsidy, colonization, sale and notification.

Territorial Lands - The most significant change to take place in land administration in the Yukon Territory and Northwest Territories was of direct benefit to the purchasers of lands in the north, resulting from the amendments to the Territorial Lands Act and other related statutes, which received Royal Assent on March 7, 1968, authorizes the Minister to issue a notification to the appropriate Registrar of Land Titles directing him to issue a certificate to the person named in the document. It is estimated that this procedure represents a saving of six weeks in passing title to lands from the Crown to a purchaser.

Another significant change in the Northwest Territories was presaged by the completion of arrangements for the Government of the Northwest Territories on April 1, 1969, to assume jurisdiction over most of the administrative responsibilities in the Mackenzie District previously exercised by the Department. This will include municipal development functions and land administration within, and in the immediate vicinity of, the municipalities, townsites, and settlements.

The majority of the vacant Crown-owned surveyed lots in the townsites and settlements have already been transferred to the administration of the Yukon Territory and the Northwest Territories, and negotiations were started with both governments to establish municipal development areas to have all the interests of the Crown in lands within these boundaries, with the exception of parcels required for federal purposes, transferred to the administration of the respective Territory. This is in accord with the recommendations of the Carrothers Commission and it will give the Territories autonomy in the disposal and control of the lands within the immediate influence of the established communities.

The development of the Clinton Creek and Vangorda Creek (Fara) townsites proceeded on schedule, and a new subdivision of approximately 100 residential lots at the Carcross cut-off on the Alaska Highway will be surveyed in the summer of 1969. Many of these lots were already covered by agreements of sale.

A total of 145 legal surveys were carried out in the Territories during the fiscal year, including extensive additions in the Riverdale area of Whitehorse and the subdivision at Porter Creek north of the capital city in the Yukon Territory, and in the Town of Yellowknife in the Northwest Territories. The main line of the C.N.R. railway right-of-way from the Alberta boundary to the town of Hay River, and the Pine Point branch line, were also surveyed in the fiscal year. Original subdivision surveys were also conducted at Clyde River, Frobisher Bay, Grise Fiord, and Lake Harbour in the eastern Arctic.

Public Lands - Approximately $85,000 in revenue was secured from the lease or sale of public lands in southern Canada in the fiscal year. Properties valued in excess of one million dollars were acquired from, or transferred to, other federal departments, free of charge, for public purposes.

Fifty-nine title reviews were carried out to verify federal ownership of parcels of land. They are being placed on a revenue-producing basis as

rapidly as possible. Concurrently, 79 abstracts of title were documented for historical research projects, and 412 certified facsimiles of Letters Patent, or photocopies of similar important papers, were produced. During the fiscal year, 27, 000 files were catalogued, indexed and prepared for shipment to the Dominion or Provincial Archives, and thousands of key registers and documents were preserved on micro-film for future reference. Three thousand seven hundred general enquiries concerning property rights were dealt with over the same period, and an increase in foreign interest in settlement in Canada became much more apparent.

General - One hundred and twenty-five new leases and 71 agreements for sale were issued in the Northwest Territories, and 195 leases and 65 agreements for sale in the Yukon Territory. A total of 1, 297 leases and agreements were in force in the Territories by March 31, 1969.

The breakdown of the leases in force shows types of land use as follows:

Agricultural	23	Religious	60
Commercial	484	Residential	563
Educational	12	Residential & Agricultural	11
Gardening	20	Subdivision	4
Grazing	65	Water Transmission	1
Quarrying	23	Licence	6
Recreational	25		
	Total	1, 297	

Economic Staff

The Economic Staff Group is one of four Divisions which comprises the Northern Economic Development Branch. The Group provides advice on the northern economy to senior departmental management, and undertakes studies on matters which relate to the economic development of the north.

The undertaking of major studies in various fields is a continuous function of the Group. Some of these studies are conducted entirely within the Group, while others, due to limitations in staff strength, are undertaken by private consultants. Functionally, the Group is divided into three Sections.

The Resources Section is concerned with the general field of northern mineral and other resource development.

The Transportation Section undertakes studies in the transportation field.

The Economic Projects Section undertakes projects which do not fall directly under the other two specializations.

Personnel of a Statistical Section, which acted in a support capacity to the Economic Staff Group by compiling and processing statistical data on all phases of northern development, were due to join the newly formed Central Statistics Division of the Department at the beginning of the new fiscal year, 1969-70.

Projects completed in 1968 - Several resource industry studies were carried out; these included studies of forestry operations in National Parks, a study of indigenous employment in the mining industry of northern Canada, and a study of the Yukon Territory power industry. Projections were made of resource industry development in the Yukon Territory and Northwest Territories and work continued on the application of computer techniques to regional and project feasibility studies.

The Economic Staff Group also completed demographic and labour supply, and demand studies with respect to the Yukon Territory and Northwest Territories, and for use in development planning.

A major study of the potential growth and viability of the Yukon economy was completed in November by the consulting firm of D. Wm. Carr and Associates Limited of Ottawa. The study, which cost $140,000, was undertaken under the joint auspices of the Department of Indian Affairs and Northern Development and the Government of the Yukon Territory.

A separate study of the fiscal position of the Yukon Territory was completed for the Department by the chartered accountant firm of Touche, Ross, Bailey and Smart; the Economic Staff reviewed and interpreted the study, and undertook specific assignments arising out of the study.

A manpower survey of the Keewatin District was conducted by the Economic Staff Group in January 1969, at which time questionnaires were completed in the field to provide information on vital statistics, language skills, education, training background, and work history of over 2,400 Keewatin Eskimos. Apart from the fact that individual print-out records are available for every Eskimo surveyed, the statistical tabulations obtained from the survey were helpful to the Economic Staff Group in the planning of a development strategy for the north.

Much emphasis was placed on studies aimed at investigating the transportation problems likely to be encountered in the Arctic and along the Arctic coast. In particular, the pilot phase of the research focussed on the techniques that might be used in moving large volumes of minerals to suitable markets. The second phase of the research will be directed towards a detailed analysis of the specific transportation system which was been suggested by earlier studies.

The indications are that the evolution of a development strategy for the Yukon Territory and the Northwest Territories will continue to be accorded top priority in the work-program of the Economic Staff Group during the coming fiscal year.

NORTHERN ADMINISTRATION BRANCH

In the absence of a Territorial public service, the former Northern Administration Branch provided government services to the residents of the Northwest Territories. Until September 1968, the headquarters organization of the Branch consisted of a Directorate, five Divisions - Territorial, Education, Welfare, Engineering, Industrial - and a

Financial and Management Adviser, and a Personnel Adviser. The field organization included district offices for the Arctic and Mackenzie Districts. In September 1968, reorganization within the Department saw the demise of the Northern Administration Branch (replaced by the Territorial Relations Branch) and the Ottawa education, welfare, engineering and industrial functions were moved into other program areas in the Department. While program developments in northern education, welfare and engineering are included hereunder, the economic development program in the Northwest Territories is referred to under Indian-Eskimo Economic Development Branch.

Territorial Relations

The most important development in territorial relations during the fiscal year was the progressive transfer to the Government of the Northwest Territories of responsibilities and functions hitherto carried out in the Mackenzie District by the district staff of the Northern Administration Branch. Although the final date of transfer of responsibility for the various government services was April 1, 1969, many programs were handed over prior to that date. In addition, work began on the development of plans for a similar transfer of responsibilities in the Eastern Arctic (Keewatin and Baffin Regions) on or before April 1, 1970.

Most of the federal staff in the Mackenzie District joined the Territorial Government. Within the Department, the residual responsibilities of the former Northern Administration Branch devolved upon the new Territorial Relations Branch which will be responsible for federal-territorial financial matters and other operational arrangements between the Department and both the Yukon Territory and Northwest Territories. This is in accordance with the Department's Northern Development Program.

Financial Agreements, Northwest Territories and Yukon Territory -

The fiscal year 1968-69 was the final year of the two-year (1967-69) agreements with each of the Territorial Governments. These agreements included provisions for the following levels of financial assistance by the Government of Canada.

Grants, Loans	1968-69 (Actuals)	
	Northwest Territories	Yukon Territory
	(dollars)	(dollars)
Operating Grants	5,153,058.00	4,590,645.51
Capital Loans	4,629,105.00	3,038,439.00
Amortization Grants	1,239,042.00	985,654.49

In addition, the Commissioner of the Northwest Territories was given further financial assistance outside the original agreement to meet housing and operation costs for the new headquarters staff that moved to Yellowknife in September 1967.

Other Services

Continued assistance was given to each of the Territorial Governments both in the development of their legislative programs and in the expansion of their own services. Much preparatory work was done on proposals affecting constitutional development in the north.

Housing Programs

Approximately $4 million was spent on the provision of 340 three-bedroom houses and on their construction, as well as another 100 which had not been completed during the previous year. These houses were supplied under the Northern Rental Housing Program, applicable to Indians and Eskimos of the Northwest Territories and Arctic Québec, and which provides housing, basic furniture, fuel, electricity and other municipal services which are available at a rent based on income. About $300,000 was received during the year from these rental payments.

The Indian Off-Reserve Program and Eskimo Re-establishment Housing Program were available in areas of economic opportunity anywhere in Canada, and provided forgivable second mortgage loans up to $9, 000 to borrowers who obtained first mortgage loans at prevailing at prevailing National Housing Act rates from approved lenders or the Central Mortgage and Housing Corporation.

The Territorial Low-Cost Housing Program, available to residents of the Yukon and Northwest Territories, provided for first mortgage loans of up to $8, 000 at NHA prevailing rates of interest, and prevailing rates of interest, and second mortgage loans of $1,000 interest free and forgivable at the rate of $100 per year, to persons who cannot qualify for a loan under the National Housing Act.

The Territorial Second Mortgage Program, also available to any resident of the Yukon Territory or the Northwest Territories, for persons who have obtained a first mortgage under the National Housing Act, provided for a maximum loan of up to $2, 000 repayable over the same term as the first mortgage and with interest at a rate one per cent higher than the prevailing NHA rate.

Under the Territorial Low-Cost Housing Program and the Territorial Second Mortgage Program some 72 loans were approved, all to residents of the Yukon Territory.

Education

The 1968-69 school year was one of significant change in the Department's northern school program. The first phase of a two-phase transfer program was implemented in April 1969, when the Director of Education for the Northwest Territories assumed direct responsability for the administration of all education programs including the 38 schools in the Mackenzie District, with a total enrolment of 1, 568 Indians, 1, 157 Eskimos, and 3, 466 others. In January 1970, the final phase of the transfer will be completed when the Director of Education also assumes responsibility for the educational administration in the Districts of Franklin and Keewatin where 22 schools are in operation.

In 1968-69, a total of 71 schools were operated in the northern system, including 59 in the Northwest Territories, 10 in Arctic Quebec, and two in northern Manitoba. The total enrolment was 9,707 comprising 4,033 Eskimos, 1,629 Indians, and 4,045 others, representing an enrolment increase of 7.6 per cent over the previous year.

Many of the northern settlements are too small to justify the establishment of junior and senior secondary Grades (VII to XII). Consequently, approximately 1,200 students from these smaller centres were accommodated during the year in pupil residences at larger centres, such as Inuvik, Yellowknife, Fort Simpson, Fort Smith, Fort McPherson, Chesterfield Inlet, and Fort Churchill.

Enrolment in pre-school classes, which began on an experimental basis in 1966, continued to increase. In 1968-69, a total of 582 pre-schoolers were enrolled in classes operated in 24 northern communities, compared with an enrolment of 301 in the previous year. An additional 298 were enrolled in pre-school classes operated under private auspices in six communities in the Mackenzie District.

One hundred and three students from the Northwest Territories received financial assistance under the Northwest Territories Students Grants Program to attend universities in southern Canada, and 11 students received Canada Student Loans.

Eighty classrooms and 51 special instructional areas were designed or constructed to accommodate pupils in the Northwest Territories and Arctic Québec, at a cost of approximately $3 million. New schools were opened at Inuvik, Aklavik, Sachs Harbour, and Repulse Bay.

The number of students taking vocational training increased by over 30 per cent to approximately 1,205. Occupational courses were revised to reflect the changing methods of industry. Courses dealing with big game guide training, forest rangers, and forest fire fighting were offered for the first time, and a training centre for heavy equipment operators was established in the Mackenzie District.

Many more adult education programs, designed to meet the special needs of Indians and Eskimos were developed and offered during 1968-69 than in previous years. Thirty-one adult basic education courses, with a total enrolment of 647, were offered in 19 settlements; 77 social education courses with a total enrolment of 1, 820 were offered in 44 settlements; and 39 issues of adult education newsletters were published in Eskimo syllabics and English and distributed in four regions. One region made extensive use of radio by producing and broadcasting 14 special programs. The Housing Education Program was continued and extended to the Western Region. A total of 1, 821 families in 33 settlements participated in this program.

Welfare

A considerable amount of work was done in completing plans to hand over the administration of welfare programs in the Mackenzie District to the Northwest Territories Government by the end of the fiscal year.

Supervisory and consultative services for welfare programs in the Northwest Territories and Arctic Quebec were also provided as a continuing service. These programs included social assistance, care for the aged, care and protection of children, rehabilitation services, repatriation of Eskimo patients to their homes, and special care services. In the year under review, approximately $1, 106, 365 was spent on social assistance programs for Eskimos and registered Indians. Distribution of this amount was as follows: Mackenzie District, $607, 285; Arctic District, $499, 080.

Community Welfare - Plans were made to transfer to the Government of the Northwest Territories responsibility for community development activities, including the Community Development Fund used by community councils for projects that are beneficial to the community.

Northern Administration Branch

Table 1 - Enrolment and Classification of Pupils, Arctic District, September 30, 1968.

School	Number of Teachers	Number of Classrooms			Enrolment by Status						
		Regular		Sp.	Eskimo		Indian		Other		Total Enr't
		ES	HS		M	F	M	F	M	F	
Arctic Bay	2	2			24	28					52
Broughton	4	4			41	47				3	91
Cape Dorset	6	6			68	58			1	4	131
Clyde River	2	2			23	29					52
Frobisher Bay	29	21	1	3	177	189			46	48	460
Grise Fiord	2	2			18	11					29
Hall Beach	2	2			18	21			1		40
Igloolik	5	5			54	45			1	2	102
Lake Harbour	2	1			19	23					42
Pangnirtung	7	6		1	84	83				3	170
Pond Inlet	5	5		1	56	60			4	2	122
Resolute Bay	2	2			31	17				3	51
Port Burwell	2	2			22	22					44
Belcher Islands	1	1			17	7					24
Baker Lake	7	7			95	80			7	8	190
Chesterfield Inlet	5	5			53	56					109
Churchill Vocational Centre	20		6	9	103	83	3	2			191
Coral Harbour	3	3			29	36		1			66

(continued)

Table 1 - (continued)

Eskimo Point	6	6		2	57	61				3	123
Rankin Inlet	7	6		2	69	67				11	159
Whale Cove	2	3			23	17				3	45
Repulse Bay	School opened November 1968										
Total:N. W. T.	121	91	7	18	1, 081	1, 040			3	3	2,293

Northern Administration Branch

Table 2 - Enrolment and Classification of Pupils, Arctic District, September 30, 1968

		Number of Classrooms			Enrolment by Status						
School	Number of Teachers	Reg.			Eskimo		Indian		Other		Total Enrol.
		Elem.	HS	Sp.	M	F	M	F	M	F	
Fort Chimo	5	5			36	41			12	7	96
Port Nouveau	2	2			18	29					47
Post-de-la-Baleine	9	8		1	82	70	26	21	4	3	206
Ivujivik	1	1			10	11					21
Koartac	1	1			11	16					27
Bellin	2	2			17	24					41
Inoucdjouac	4	4			46	48			2	1	97
Povungnituk	7	7			76	70			3		149
Saglouc	3	3			27	27			2	1	57
Maricourt	2	2			22	13					35
Totals, Arctic Quebec	29	35		1	345	349	26	21	23	12	776
Totals, N. W. T.	121	91	7	18	1, 081	1, 040	3	3	77	89	2, 293
Totals, Arctic District	150	126	7	19	1, 426	1, 389	29	24	100	101	3, 069
Duke of Edinburgh											447
Total: Including Duke of Edinburgh											3, 516

Northern Administration Branch

Table 3 - Enrolment and Classification of Pupils, Mackenzie District, September 30, 1969.

School	Number of Teachers	Number of Classrooms			Enrolment by Status						Total Enr't
		Reg.			Eskimo		Indian		Other		
		Elem.	HS	Sp.	M	F	M	F	M	F	
Aklavik	9	7	1	1	48	49	15	25	26	24	187
Cambridge Bay	8	7	1	3	66	64			16	8	154
Coppermine	7	6	1		71	77			3	10	161
Discovery	1	1							11	6	17
Echo Bay	1	1							2	4	6
Fort Franklin	5	5					35	51	5	4	95
Fort Good Hope	2	2					12	17	6	7	42
Fort Liard	1	1					10	5	2	3	20
Fort McPherson	9	7	2		1		61	86	22	26	196
Fort Norman	3	3					16	20	10	8	54
Fort Providence	5	4	1	2			42	51	14	10	117
Fort Resolution	9	6	1	2			36	26	53	46	161
Fort Simpson	20	10	3	5	23	12	95	121	74	59	384
Fort Smith	49	22	11	11	5	2	105	94	354	280	840
Gjoa Haven	3	3			25	29					54
Hay River Elem.	9	8		3	2	2	2	4	103	110	223
Hay River Sec.	12		7	5				4	83	77	164
Hay River Sep.	12	7	3	4			9	8	87	69	173

(Continued)

Table 3 - Continued

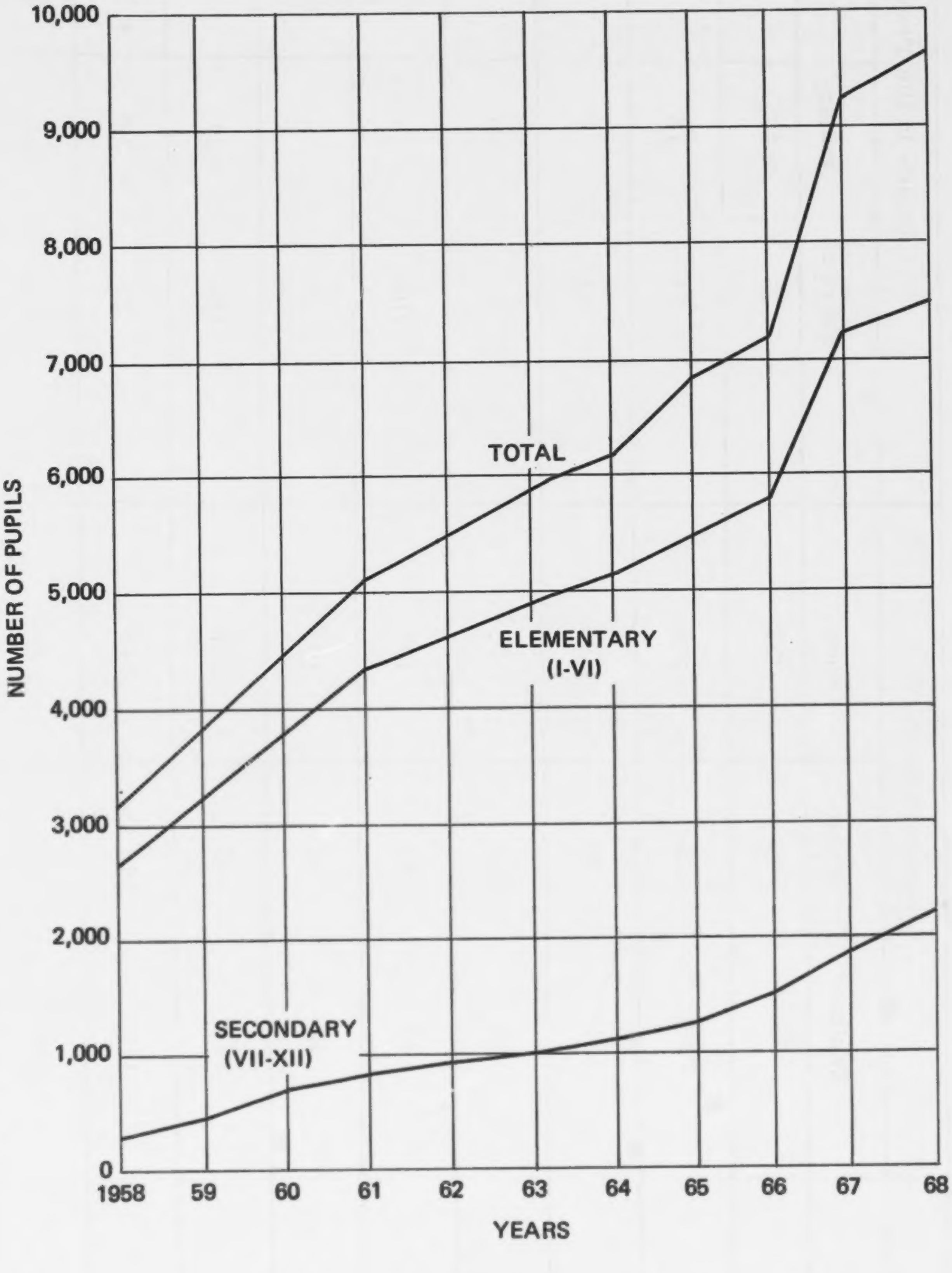
Holman Island		3	3		27	31			4	3	66
Arctic Red R.	1	1					9	6	4	1	20
Inuvik Elementary	36	28		4	124	128	33	29	169	154	637
Inuvik Secondary	24		16	7	61	45	36	29	78	84	331
Jean Marier	1	1					6	6			14
Lac La Martre	1	1					20	20	1	2	43
Nahanni Butte	1	1					6	8		1	15
Norman Wells	3	2	1						29	17	46
Pelly Bay	2	2			12	14					26
Pine Point	7	5	2					4	75	65	144
Rae	7	7					97	100	13	2	212
Sachs Harbour	2	2		3	15	19					34
Spence Bay	3	3			31	33					64
Snowdrift	2	2					24	21	2	2	49
Tuktoyaktuk	7	6	1	3	65	53	5	2	8	3	136
Tungsten	2	2							10	13	23
Yellowknife (Sir J. F.)	28		10	13	11	12	44	36	115	127	345
Yellowknife Pub.	30	18	6	6					323	242	565
Yellowknife Sept.	17	10	6				22	18	154	139	333
Wrigley	2	2					13	22	4	2	41
Totals	344	196	73	72	587	570	755	813	1358	1608	6, 191

Northern Administration Branch

Table 4 - Enrolment in Pupil Residences, Northern Education Program March 31, 1969.

Large Residences	Indians	Eskimos	Others	Total
Fleming Hall, Fort McPherson, N.W.T.	57	--	12	69
Bompas Hall, Fort Simpson, N.W.T.	34	15	16	65
Lapointe Hall, Fort Simpson, N.W.T.	118	1	19	138
Breynat Hall, Fort Smith, N.W.T.	--	121	30	151
Grollier Hall, Inuvik, N.W.T.	77	54	49	180
Stringer Hall, Inuvik, N.W.T.	137	13	22	172
Turquetil Hall, Chesterfield Inlet, N.W.T.	--	46	--	46
Akaitcho Hall, Yellowknife, N.W.T.	57	22	87	166
C.V.C. Residence, Fort Churchill, Man.	5	200	7	212
Small Residences				
Fort Franklin, N.W.T.	8	--	--	8
Cambridge Bay, N.W.T.	--	7	2	9
Igloolik, N.W.T.	--	6	--	6
Pond Inlet, N.W.T.	--	7	--	7
Port Harrison, P.Q.	--	22	--	22
Great Whale River, P.Q.	--	21	--	21
Totals	448	580	244	1,272

Figure 1 — Enrolment by Elementary and Secondary Groupings, N.W.T. and Arctic Quebec, 1958–1968



Northern Administration Branch

Table 5 - Vocational Education, Northwest Territories

Fiscal Year	Courses in the N. W. T.			Courses in the Provinces			
	Eskimo	Indian	Other	Eskimo	Indian	Other	Totals
1959-1960	59	92	122	43	27	33	376
1960-1961	53	68	108	35	18	51	333
1961-1962	51	89	96	32	9	39	316
1962-1963	94	123	93	51	9	42	412
1963-1964	89	89	174	108	14	45	519
1964-1965	94	94	193	95	6	51	533
1965-1966	147	113	277	104	27	91	759
1966-1967	150	145	343	77	22	117	854
1967-1968	160	154	361	120	30	100	925
1968-1969	400	220	292	181	43	69	1205

The first Baffin Regional Eskimo Council met at Frobisher Bay. As at earlier meetings in other regions, the delegates learned much from discussions about common community problems.

Cultural Developments - Numerous displays of Eskimo sculpture, ceramics and graphic prints were organized for exhibition in Canada, the United States and Europe.

The development of Eskimo literature and the discovery of northern writers has continued at a steady pace. The Eskimo language magazine "Inuttituut" is now entirely made up of Eskimo-written material. At the beginning of 1969, the first genuinely Eskimo-written full-length book "The Autobiography of John Ayaruaq" was published in syllabics. This book has drawn enthusiastic support from readers and some requests for an English version. Markoosie of Resolute Bay, N.W.T., has produced the first Eskimo novel of Canada's northern people. He wrote the story in both English and Eskimo. It is serialized in "Inuttituut" and negotiations were in progress to publish the English version. Enough folklore material has now been gathered for the assembly of an anthology of Eskimo folktales for publication in syllabic script and in English.

Grants were provided to assist promising individuals and groups in the creative and the performing arts. Cultural development officers worked closely with Canadian and overseas arts councils, museums, universities, art galleries and drama societies to promote the artists and their works and to bring them before the public.

Liaison was also maintained with the Canadian Eskimo Art Council, of which the members are: George Elliott (Chairman), Jean Beetz, M.F. Feheley, Miss Kathleen Fenwick, Mrs. Alma Houston, James Houston, Jean-Noel Poliquin, John Robertson, Mrs. Doris Shadbolt, George Swinton, Dr. William Taylor and Robert Williamson.

Engineering - The Engineering Division provided support in the Yukon, the Northwest Territories, and in Nouveau-Québec, to those parts of the Branch that are concerned with economic, social, and political development;

developed and maintained a network of northern roads for communication and resource development; aided private enterprise and the private individual by providing fuel and electrical energy at moderate prices; constructed airstrips to facilitate development of the natural resources; devised community plans for settlements so that growth might be orderly; developed plans for houses and other buildings, and for water, sewage, fuel and electrical services designed to meet the particular requirements of climate and living conditions in the north.

Under the Territorial Roads Policy, approximately $9 million was spent in 1968-69 for building 129 miles of new and reconstructed roads - 84 miles in the Yukon, and 45 miles in the Northwest Territories.

In the Yukon, the Ross River-Carmacks section of the Campbell Highway was completed except for crushed gravel surfacing. Boundary Road reconstruction was completed for the first 38 miles west of Dawson. Reconstruction of the Whitehorse-Keno Road was completed on the first 30 miles north of its junction with the Alaska Highway.

In the Northwest Territories, the Mackenzie Highway was extended another 35 miles towards Fort Simpson, bringing the highway to within 95 miles of this community. About five miles of connector roads were reconstructed in the capital area of Yellowknife. Farther north, at Cambridge Bay a five-mile airport access road was completed.

As part of the program to reduce the cost of fuel oil, bulk-oil storage facilities were erected in Coral Harbour, Repulse Bay, Eskimo Point, Whale Cove, Igloolik, Cape Dorset, Pangnirtung, Lake Harbour, Hall Beach and Pelly Bay.

Plans were made for tanks of bolted or welded construction, to encourage competition and thereby obtain better prices. Approximately 6, 600, 000 gallons of fuel oil were purchased for departmental operations, Eskimo housing, and for sale to private consumers in remote locations where alternative local sources of supply are not available. Further assistance was given to oil companies making studies of the market for heating oil. A contract was entered into with one of the integrated oil companies to take over the supply and delivery of fuel oil at ten settlements in the Eastern Arctic.

New powerline and extensions to serve the expanded Eskimo villages were designed and tenders were called for materials for Clyde River, Sugluk, Fort Chimo, Repulse Bay, Lake Harbour, Hall Beach, Coral Harbour, Baker Lake, Povungnituk, Pangnirtung, Eskimo Point, Cape Dorset, Broughton Island, Igloolik, Rankin, Pond Inlet and Resolute Bay. The increased load arising from the use of new industrial type buildings, schools and residences necessitated design and tender action for an additional 870 KW in diesel generator capacity. The installed cost of these electrical distribution systems and plant amounted to over $900, 000.

Sixteen prefabricated metal buildings comprising four warehouses, seven garage buildings, and five larger powerhouses were purchased, shipped and erected in 16 different settlements at a cost of approximately $450, 000. The old laundry at Frobisher was relocated in a part of the new warehouse. A fish processing plant was built into one half of a new warehouse at Port Burwell. These two extensions, plus an extension to the powerhouse at Fort Chimo were valued at approximately $50, 000.

Utilidors to service co-operative housing in Inuvik were designed and prefabricated by local people for installation in the summer of 1968; an extension of the utilidor with water points was constructed at Rankin Inlet to service Eskimo housing, and a water and sewer utilidor was installed at Frobisher Bay.

A new water supply system was designed for Spence Bay and plans prepared for the improvement of the existing water and sewer services at Churchill, Manitoba.

Designs were completed and tenders called for industrial-type warehouses, garages and powerhouses. Special designs were prepared for industrial shops and canneries.

On behalf of the Territorial Government, municipal fire-alarm systems were designed for Pine Point, Coppermine, Cambridge Bay, Tuktoyaktuk, and evacuation fire-alarm systems were designed for two nursing stations and 20 schools. Municipal fire-alarm systems were also designed and tenders were called for material, for Whale Cove, Fort Chimo, Eskimo Point and Broughton Island. A standard minimum fire-alarm system was designed and estimates were prepared for improvements to the systems in Fort Providence, Fort Liard, Fort Wrigley, Snowdrift, Lac La Martre and Fort Norman.

Town Planning - During the year, additional planning-staff officers were engaged by the Department and a field trip was made to the Mackenzie settlements of Fort Providence, Jean Marie River, Fort Simpson, Fort Norman, Norman Wells, Fort Franklin, Fort Good Hope, Colville Lake, and Arctic Red River to gather data as a basis for interim development plans and for the transfer of authority to the Territorial Government. The planning team subsequently revisited the settlements and introduced the territorial planner to the local communities.

Additional visits were made to Sachs Harbour, Reindeer Station, Aklavik, Inuvik, Fort McPherson, Yellowknife, and Fort Smith in the Mackenzie; to Coral Harbour, Repulse Bay, Chesterfield Inlet, Rankin Inlet, Whale Cove, Eskimo Point, and Churchill in the Keewatin District, and to Frobisher Bay in the Baffin Region.

Meetings were held in many of the settlements with Advisory Councils and Housing Associations. Some planning proposals were amended to meet the desires of the local people.

The most interesting task of the year was that of preparing for the proposal bids on the design, construction and operation of the new town centre complex in Frobisher Bay. The plan was modified to make a single parcel of the blocks for commercial development, apartments and recreation. This, together with the specification for the call, offered maximum flexibility to the designers while retaining over-all planning objectives. Five totally different schemes were submitted.

The successful proponent has made excellent progress on the construction of the project. The town centre will not only provide a strong visual, social and commercial focal point in the community, but also tie together the lower base, the hospital and Ikaluit. The town centre is typical of towns in the provinces and will do much to remove the military-camp look from the settlement. While the introduction of private enterprise to the north will serve to de-emphasise the role of the Territorial Government it will, at the same time, strengthen that sense of local identity which is essential to responsible local government.

Frobisher Bay could be the first of many modern towns in the Northwest Territories.

Architectural Services - Architectural Services prepared designs for school additions at Pelly Bay, Lake Harbour, and Coral Harbour, and materials were shipped to the sites for construction during 1969. A two-classroom school with an activity room was designed for Sachs Harbour and construction was completed in time for the school-year commencement. Materials were shipped for schools designed for Clyde River and Igloolik. Drawings were prepared for a school addition and alterations at Fort Franklin for construction in 1969. Four transportable classroom units were purchased and shipped.

A new design for a transportable hostel complex was used for the construction of units at Cambridge Bay, Fort Good Hope, and Fort Liard, to be ready for occupancy in 1969. A standard administration building was designed. A new design for an Eskimo house was prepared, incorporating changes suggested by the Eskimo Housing Association. This plan is available for both prefabricated and on-site construction.

A design for a small laboratory building was prepared for the National Research Council, to be erected at Igloolik in 1969 for use by the International Biological Congress.

Tenders were prepared and proposals for rental accomodation were received for the town centre complex under construction at Frobisher Bay, designed to provide office space, housing, stores, hotel and recreational facilities for an expanding community. Office accomodation and housing were scheduled for occupancy early in 1971.

Tenders were prepared for rental accommodation in a town centre at the new town of Faro, as a service to the Territorial Government of the Yukon.

In co-operation with the Department of Public Works, design work was carried out for school additions at Cape Dorset, Baker Lake, Fort Simpson,and Pine Point.

A new academic-vocational school was designed for Frobisher Bay, the construction of which is to commence in 1969.

Receiving homes for children were designed and constructed at Hay River, Inuvik, and Fort Smith.

Maintenance of Buildings and Works - In the Yukon Territory and Northwest Territories, maintenance was carried out on departmental buildings, works, and equipment that have a capital value in excess of $107 million. Approximately 195 tradesmen were employed on full-time maintenance work, and were paid wages and allowances amounting to $1, 245, 600. The total cost of the maintenance program, including labour and materials, was $4, 907, 800.

The total expenditure for municipal services, which include fuel, power, water, sewer and garbage amounted to approximately $7, 065, 000.

Northern Supply Program, 1968

Eastern Arctic and Arctic Quebec - Approximately 22, 555 tons of material were shipped to sites in the Eastern Arctic and Arctic Quebec in 1968 by sea transport at a cost of $1, 200, 000. Both the port of Montreal and the port of Churchill were used for the trans-shipment of this material to the north. The tonnage handled through each port was as follows:

Port of Montreal	
Dry cargo including petroleum products in drums	7,089 tons
Bulk oil (delivered by tanker ships)	2,660 tons
Total	9,749 tons

Port of Churchill	
Dry cargo including petroleum products in drums	1,606 tons
Bulk oil (delivered by tanker ships)	11,200 tons
Total	12,806 tons

In the spring of 1968 a major airlift was organized from Churchill to supply Pelly Bay and to deliver prefabricated bulk-oil storage tanks to eleven sites in the north so that these tanks could be erected during the summer months and be ready for the acceptance of bulk oil in September and October 1969. In addition, two 25-ton tractors were airlifted to Eskimo Point so as to get an early start on the construction of a water reservoir at that site. A 250 KW generating plant was also shipped by air to Fort Chimo. This airlift included 75,000 gallons of oil and other supplies for Pelly Bay. Altogether, 910 tons of material were airlifted at a cost of $312,000.

The positioning of material to erect bulk-oil storage tanks at eleven sites obviated the need of sending fuel oil in 45-gallon drums which would have cost the Department over $900,000, compared with $157,000 for bulk oil, a very substantial saving.

It was necessary to organize a second airlift later in the year so as to complete supplying Pelly Bay; this involved the delivery of 30,000 gallons of oil in drums, and a two-bay garage. The estimated cost of this airlift was approximately $42,000. Ice conditions preclude the shipment of supplies direct to Pelly Bay by sea transport, consequently, air service is the only practicable alternative.

At the close of the shipping season, very little material was left behind at the port of Churchill and the port of Montreal. The 1968 operation was more efficient than the operations of previous years: many settlements received their material earlier; reports also indicated that the cargos arrived in good condition; and the use of the port of Churchill made it easier to get cargo to some northern sites earlier than had, hitherto, been possible when the operation was mainly confined to the port of Montreal.

Reduction in material transportation costs were realized through the negotiation of special tariff rates, extension of the Mackenzie District shipping contract and internal audit of carriers' freight accounts.

The entire 1968 operation will be reviewed in detail so as to introduce further improvements in 1969, e.g. the use of containers to move material will be examined in relation to the type of packaging now in use. Improved unloading areas at northern sites are also desirable.

SOCIAL AFFAIRS

FEDERAL-PROVINCIAL RELATIONS

During the year, discussions took place with several provinces concerning such matters as the extension of welfare services to Indians, master education agreements, forest fire agreements and the revision or renewal of existing natural resources agreements. The terms of the highway construction and maintenance agreement with Saskatchewan were changed. However, no new federal-provincial agreement in respect to Indians was concluded during the year.

Future arrangements concerning the provision of services to the Indians and Eskimos by the Province of Newfoundland were considered by the federal-provincial committee. Members of the committee visited the seven Indian and Eskimo communities in northern Labrador covered by the agreement and reviewed the activities which had been conducted. During the five-year term of the agreement, a housing program has provided adequate housing for nearly all of the Indians and Eskimos. The educational program has been upgraded through the construction of new, well-equipped schools in several communities and with additional classrooms in others. Plans for a new high school at Northwest River were approved. A native sawmill was established in one Indian community. As a result of these programs, there has been a general improvement in economic conditions. The committee concluded that the agreement had served the interests of the native people and both governments and recommended to Canada and Newfoundland that the agreement be renewed for a further five-year term from March 31, 1970 to March 31, 1975.

As the three-year terms of office of the regional Indian advisory councils expired on March 31, 1968, steps were taken during the year to establish new regional advisory councils. Members of each council had been asked, during the last meeting, for advice on any improvements in the method of member selection, and for any preference in the structure of the council. Practical suggestions were made. These suggestions were followed in all cases. As a result, most of the councils have increased their membership and, in two regions, the advisory function will be undertaken by the provincial Indian association. Only one or two of the new advisory councils managed to hold meetings because their members were extensively involved in a major consultation on the Indian Act between officials of the Department and representatives of all Indian Bands. The rôle of the Indian-Eskimo Bureau is summarized hereunder.

INDIAN-ESKIMO BUREAU

Correspondence and Parliamentary Questions - In consultation with appropriate Branch officers replies are prepared in answer to correspondence received by the Minister, Deputy Minister and Director of Operations on matters pertaining to the Departmental program in support of Indian and Eskimo people.

Replies to Parliamentary Questions and Orders for Return, including Motions for the Production of Papers, are prepared or co-ordinated.

Consultation - A rapport is maintained with the leaders of Indian and Eskimo Associations, Brotherhoods, native organizations and non-native organizations concerned with the affairs of Canada's native people. Consultations are carried out, and plans are made for consultation meetings as required.

Enquiries and grievances received from Indian and Eskimo people are directed to the appropriate headquarters officials.

Visits of Indians and of Eskimos to headquarters are co-ordinated. Guidance, including support as required, is provided to all transient Indians and Eskimos who visit headquarters to request assistance.

Co-ordination services for inter-departmental and inter-governmental meetings related to the Indian people of Canada are provided, as well as for meetings between Indian associations and governmental agencies.

Treaty Activity and Research - All existing treaties, agreements and relevant judicial decisions concerning Canada's native people are reviewed and analysed to determine what commitments have been made and to what extent these commitments have been, are being or should be met.

Co-ordination of headquarters' involvement in the establishment of new Indian Reserves is maintained.

An advisory service is provided on treaties to Departmental staff and to the Indian peoples.

Policies are formulated and recommended for Indian and Esquimo hunting and fishing rights.

Policy Development - Legal - Policies are formulated and recommended (regulations under the Indian Act) with respect to taxation, liquor, legal rights of Indians, and the removal of Indian artifacts.

Policies are formulated and recommended in matters relating to the provision of legal aid to Indians.

Policy is also formulated with respect to policing and trespass on reserves.

Membership - Indian Bands - As of December 31, 1968, the Indian population totalled 237,490, an increase of 6,493 or 2.85 per cent during the calendar year.

Seven hundred and eighty-five persons were enfranchised between April 1, 1968 and March 31, 1969. Of these, 57 applied for enfranchisement and 728 resulted from marriages of Indian women to non-Indians. A total of $175,399.64 was paid out in enfranchisement funds during the fiscal year.

Two hundred and fifty-seven adoptions were registered during the fiscal year. Of these, 57 children were adopted by Indians and 200 by non-Indians.

The addition of 36 persons to membership in Indian Bands was protested during the fiscal year ending March 31, 1969. Decisions were reached on 14 of these protests and all 14 persons were declared entitled to be registered as Indians. The remaining 22 are still under investigation.

Decisions were also made on 52 protests which were received prior to the beginning of the fiscal year. Of these, 47 were declared entitled and five not entitled to be registered as Indians.

See Tables 1 to 7 inclusive, referring to Indian population enfranchisements, adoptions, and memberships, on pages 116 to 121

Social Services

In the field of social welfare, the Department makes available to Indians welfare benefits comparable to those provided to other residents of the provinces. To enable Indians to participate in the full range of welfare programs established in each province, the Federal Government has been pursuing special federal-provincial cost-sharing agreements for welfare purposes pursuant to Part II of the Canada Assistance Plan. A federal-provincial cost-sharing welfare agreement continues to be implemented on behalf of Indians living in the province of Ontario.

In addition to negotiating welfare agreements, the Department finances and administers a welfare program which provides for social assistance (food, clothing, shelter) to Indians at the same rates and under the same eligibility conditions as those that apply to other provincial residents.

In accordance with federal-provincial child welfare agreements, the Department finances maintenance and protection services to Indian children in Manitoba and Nova Scotia; the Federal Government also maintains Indian children in foster homes or institutions in provinces where child care services are provided on a voluntary basis. Departmental staff with the consent of parents or guardians arrange for care of neglected children outside their own homes in areas where the services of child-care agencies are not available. Indians suffering from the physical and social handicaps of senility or chronic illness are given maintenance in homes for the aged, and in other institutions. Indians participating in upgrading and in social orientation programs in Alberta and Saskatchewan receive maintenance and tuition pursuant to departmental agreements with the Alberta Tuberculosis Association and the Saskatchewan Society for Crippled Children and Adults.

Additional Federal Government benefits available to Indians include Family Allowances, Youth Allowances, Old Age Security and Guaranteed

(continued page 125)

Indian Eskimo Bureau

Table 1 - Indian Population

Province or Territories	1954	1959	1964	1965	1966	1967	1968	1968 Inc. over 1967	1968% Inc. over 1967
Prince Edward Island	272	341	376	393	399	409	418	9	2.2
Nova Scotia	3,002	3,561	3,994	4,099	4,183	4,287	4,411	124	2.9
New Brunswick	2,629	3,183	3,717	3,824	3,912	4,039	4,156	117	2.9
Quebec	17,574	20,453	23,709	24,446	23,126	25,650	26,302	652	2.5
Ontario	37,255	42,668	48,465	49,556	52,475	51,731	52,981	1,250	2.4
Manitoba	19,684	23,658	28,833	29,996	30,994	32,227	33,358	1,131	3.5
Saskatchewan	18,750	23,280	28,914	30,086	31,362	32,579	33,852	1,273	3.9
Alberta	15,715	19,287	23,642	24,587	25,432	26,440	27,322	882	3.3
British Columbia	31,086	36,229	42,141	43,250	44,205	45,152	46,046	894	2.0
Yukon	1,568	1,868	2,215	2,292	2,337	2,477	2,562	85	3.4
Northwest Territories	4,023	4,598	5,383	5,569	5,739	5,911	6,082	171	2.9
TOTAL	151,558	179,126	211,389	218,098	224,164	230,902	237,490	6,588	2.9

Indian Eskimo Bureau

Table 2 - Enfranchisements, 1968-1969

Province, District or Territory	Adult Indians enfranchised upon application together with their minor unmarried children		Indian Women enfranchised following marriage to non-Indians together with their minor unmarried children		Total number of Indians enfranchised
	Adults	Children	Women	Children	
Nova Scotia	2	5	3	0	10
Prince Edward Island	0	0	0	0	0
New Brunswick	0	0	7	0	7
Quebec	1	0	40	1	42
Ontario	18	10	141	25	194
Manitoba	5	5	63	45	118
Saskatchewan	4	0	71	39	114
Alberta	4	0	61	35	100
British Columbia	3	0	129	37	169
District of Mackenzie	0	0	14	4	18
Yukon Territory	0	0	2	11	13
Total	37	20	531	197	785

Table 2A - Enfranchisements, 1959-1969*

1959-1960	221	248	433	221	1123
1960-1961	125	70	592	167	954
1961-1962	94	47	435	140	716
1962-1963	90	50	404	109	653
1963-1964	46	38	287	102	473
1964-1965	46	34	480	176	736
1965-1966	38	18	435	147	638
1966-1967	31	22	457	148	658
1967-1968	62	28	470	56	616
1968-1969	37	20	531	197	785
Total	790	575	4,524	1,463	7,352

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*With the exception of fiscal year column all columns correspond to boxhead references in Table 2.

Indian Eskimo Bureau

Table 3 - Adopted Indian Children

Fiscal Year	Adopted by Indians	Adopted by Non-Indians	Total
1961-62	63	58	121
1962-63	35	66	101
1963-64	74	94	168
1964-65	44	93	137
1965-66	43	123	166
1966-67	87	93	180
1967-68	54	98	152
1968-69	57	201	258
Total	457	826	1283

Table 4 - Protests

Fiscal Year	Received	Decisions Made		Total*
		Confirmed In Membership	Deleted From Membership	
1961-62	49	28	19	47
1962-63	100	46	14	60
1963-64	77	35	20	55
1964-65	68	29	19	48
1965-66	57	27	19	46
1966-67	13	22	8	30
1967-68	22	9	2	11
1968-69	36	61	5	66
Total	422	257	106	363

*Unsettled protests are carried forward into succeeding years. Of the total 422 protests received during the eight-year period 59 are still outstanding.

Indian Eskimo Bureau

Table 5 - Summary of Enfranchisements, by Province or Territory, 1968-1969

Province, District or Territory	Adult Indians and minor children enfranchised in accordance with the provisions of Section 108 (1) of the Indian Act.	Indian Women and children enfranchised in accordance with the provisions of Section 108 (2) of the Indian Act.	Total number of Indians Enfranchised
Nova Scotia	7	3	10
Prince Edward Island	0	0	0
New Brunswick	0	7	7
Quebec	1	41	42
Ontario	28	166	194
Manitoba	10	108	118
Saskatchewan	4	110	114
Alberta	4	96	100
British Columbia	3	166	169
District of Mackenzie	0	18	18
Yukon Territory	0	13	13
Total	57	728	785

Indian Eskimo Bureau

Table 6 - Enfranchisements According to the Provisions of Section 108 (1) of the Indian Act

Province, District or Territory	No. of applications received	Adult Indians enfranchised by reason of applications approved		Minor unmarried children enfranchised by reason of parents applications		TOTAL Enfranchised	Applications for enfranchisement refused	No. of Indians involved in such refusals	No. of applications pending	No. of Indians involved in pending applications	Applications received later cancelled	No. of Indians involved in cancelled applications
		M	F	M	F							
Nova Scotia	1	1	1	3	2	7	0	0	0	0	0	0
Prince Edward Island	0	-	-	-	-	-	-	-	-	-	-	-
New Brunswick	0	-	-	-	-	-	-	-	-	-	-	-
Quebec	3	1	-	-	-	1	-	-	1	1	1	1
Ontario	30	9	9	5	5	28	9	16	7	10	1	3
Manitoba	16	3	2	2	3	10	10	27	3	7	-	-
Saskatchewan	15	4	-	-	-	4	9	29	2	2	-	-
Alberta	15	4	-	-	-	4	7	24	4	10	-	-
British Columbia	13	2	1	-	-	3	5	24	4	5	2	2
District of Mackenzie	5	-	-	-	-	0	3	3	2	3	-	-
Yukon Territory	1	-	-	-	-	0	-	-	1	1	-	-
Total	99	24	13	10	10	57	43	123	24	39	4	6

Indian Eskimo Bureau
Table 7 - Enfranchisements According to the Provisions of Section 108 (2) of the Indian Act, Fiscal Year 1968-1969

Province, District or Territory	Indian women enfranchised by reason of marriage to non-Indians	Minor unmarried children enfranchised		Total Enfranchised	Minor unmarried children NOT Enfranchised
		M	F		
Nova Scotia	3	-	-	3	3
Prince Edward Island	0	-	-	0	-
New Brunswick	7	-	-	7	1
Quebec	40	-	1	41	9
Ontario	141	10	15	166	56
Manitoba	63	23	22	108	36
Saskatchewan	71	17	22	110	25
Alberta	61	18	17	96	53
British Columbia	129	15	22	166	91
District of Mackenzie	14	3	1	18	9
Yukon Territory	2	8	3	13	1
Total	531	94	103	728	284

Names and Locations of Regional Offices, District Offices and Indian Agencies

Regional Office	Amherst, N. S.
Eskasoni Agency	Eskaschi, N. S.
Miramichi Agency	Chatham, N. B.
P. E. I. Agency	Summerside, P. E. I.
St. John River Agency	Woodstock, N. B.
Shubenacadie Agency	Micmac, N. S.

Regional Office	Québec City
Abitibi District	Val d'Or
Caughnawaga District	Caughnawaga
Odanak-Lorette Agency	Village des Hurons
Pointe-Bleue District	Pointe-Bleue
Restigouche Agency	Restigouche
Sept-Iles District	Sept-Iles

Regional Office	Toronto
Bruce Agency	Southampton
London District	London
Christian Island Agency	Cedar Point P. O.
Fort Frances Agency	Fort Frances
James Bay Agency	Moose Factory
Kenora Agency	Kenora
Lakehead District	Fort William
Manitoulin Island Agency	Manitowaning

(continued)

Nakina Agency	Geraldton
Parry Sound Agency	Parry Sound
Peterborough Agency	Peterborough
St. Regis Agency	Cornwall
Sault Ste. Marie Agency	Sault Ste. Marie
Georgian Bay District	Georgian Bay
Sioux Lookout District	Sioux Lookout
Six Nations Agency	Brantford
Sudbury District	Sudbury
Tyendinage Agency	Deseronto

Regional Office	Winnipeg
Clandeboye-Fisher River District	Winnipeg
Brandon District	Brandon
Island Lake Agency	Island Lake
Norway House Agency	Norway House
The Pas District	The Pas

Regional Office	Regina
Battleford Agency	Battleford
Prince Albert District	Prince Albert
Yorkton District	Yorkton
Duck Lake Agency	Duck Lake

(continued)

File Hills-Qu'Appelle Agency	Fort Qu'Appelle
Meadow Lake Agency	Meadow Lake
Shellbrook Agency	Shellbrook
Touchwood Agency	Wynyard

Regional Office	Edmonton
Blood/Peigan District	Lethbridge
Edmonton/Hobbema District	Edmonton
Fort Vermilion Agency	High Level
Lessor Slave Lake Agency	High Prairie
Saddle Lake/Athabaska District	St. Paul
Stony-Sarcee - Blackfoot District	Calgary

Regional Office	Fort Smith, N. W. T.

Yukon Regional Office	Vancouver
Babine Agency	Hazelton
Bella Coola Agency	Bella Coola
Burns Lake Agency	Burns Lake
Cowichan Agency	Duncan
Fort St. John Agency	Fort St. John
Fraser District	Vancouver
Thompson River District	Kamloops

(continued)

Kootenay-Okanagan Agency	Vernon
Kwawkewlth Agency	Alert Bay
Lytton Agency	Lytton
North Coast District	Prince Rupert
Stuart Lake Agency	Prince George
Terrace Agency	Terrace
West Coast Agency	Port Alberni
Williams Lake Agency	Williams Lake
Yukon Agency	Whitehorse, Y. T.

Welfare Services (continued)

Income Supplement; Old Age Assistance, Blind Persons' Allowances, Disabled Persons' Allowances financed jointly by federal and provincial governments; Quebec Needy Mothers' Allowances, Ontario Family Benefits and Nova Scotia Social Assistance (Part I) are also available to the Indian residents of these provinces.

Social and Cultural Development

In October 1968, reorganization of the Department brought into being the Division of Social and Cultural Development, which replaced the former Social Programs Division of the Indian Affairs Branch and the Community Welfare Section of the Northern Administration Branch. The new Division has two Sections, the Social Development Section and the Cultural Development Section.

Social Development - The Social Development Section is responsible for the Community Development program of the Department. This program in 1968-69 was carried out through six departmental regional supervisors, and 53 community development workers, 21 of whom were of Indian status. In addition, the Department supported, in part, 33 provincial community development workers through federal-provincial shared-cost programs

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with four provinces, namely Ontario, Manitoba, Saskatchewan, and Alberta. The Department also entered its second year of a new three-year contract with the Extension Department of Francis Xavier University at Antigonish. The University will continue to do research on community development and provide community development services on seven reserves in the Cape Breton area of Nova Scotia.

The Social Development Section has responsibility for Homemakers' Clubs and other Indian women's groups. During the fiscal year, a national survey was made of Indian women's organizations. The survey indicated that there had been some new developments. For example, in the fiscal year 1967-68, there were 125 active Homemakers' Clubs and other women's organizations across the country. The active membership of these clubs ranged from 1,200 to 1,800 women. The reason for this fluctuation was withdrawal of interest for a variety of reasons. Sewing classes, housekeeping courses and seminars proved useful and popular with Indian women. The most successful Homemakers' Clubs had projects aimed at reserve betterment and community involvement. Other successful women's clubs did not like the rigid constitution of the Homemakers' Clubs. They reacted positively to a more flexible constitution that allowed projects closer to the actual area needs of the Indian women concerned.

The 1968-69 increase is noteworthy, namely, 117 Homemakers Clubs and 77 other women's organizations.

Cultural Affairs - The Cultural Affairs Section made eleven grants totalling $43,855 to Indian individuals and organizations participating in and contributing to traditional and contemporary forms of Indian music, dancing, painting, and sculpture, and for research, writing, and illustration of Indian legends for publication.

The Branch maintains a permanent collection of Indian paintings which are loaned out to various organizations across the country for exhibition purposes.

With the reorganization of the Department late in 1968, the Fine Arts Section of the Welfare Division of the Northern Administration Branch became a part of the Cultural Development Section of the reorganized Department, so that the encouragement of Indian and Eskimo arts and handicrafts of Northern Canada are now the concern and the responsibility of that Section. The sale of Eskimo soapstone carvings and prints has gained acceptance on the world's art markets, particularly in the past decade.

Leadership Training - Leadership training courses were also provided by the Department at the regional level, where Indian leaders and Band staffs learned the skills necessary for the management of community affairs related to financial, legal, and technical matters. These courses also served to bring Indian leaders together to discuss common problems and, in meeting non-Indian people, to develop mutual understanding and co-operation.

Human Resources Development Program

The Human Resource Development Training Program was held once each month for ten months during the fiscal year. Over the ten months of operation, 103 Indians attended, and 108 Departmental staff officials - some of whom were also Indian people - making a total of 211 participants. At the same time, an average of 22 resource people from headquarters were present for some of the time during each session. Over 50 different people were involved in this capacity during the year.

The program was organized so that staff and Indian people from across the country could meet to discuss problems which were important to them. Federal resource people were assigned to help explain the programs available and how these might be utilized to help solve some of the problems. In addition, it was an invaluable opportunity for the discussion of different ideas from across the country, not only among Indian participants but in conjunction with headquarters representatives and Members of Parliament.

All of the sessions followed a community development approach, the participants involving the resource people whenever they wished to do so.

By examining and questioning many aspects of Departmental programs and discovering ways in which Branch personnel and Indian people can work together to implement these programs to the best advantage, they were able to observe more clearly how the arts of communicating, listening, and understanding can become the basis of community development.

Community Affairs

Housing and Community Improvement - The Department assists Indian people in securing living accommodation, including water and sanitary services, electrification and improved roads on reserves as well as access roads between Indian reserves and adjacent communities.

Programs - There are now three housing programs on reserves as well as an Off-Reserve Program. These are summarized in the following tabulation.

Subsidy Housing Program	Known as the Welfare Housing Program for many years.
Indian On-Reserve Housing Program	Loans from Central Mortgage and Housing Corporation for construction of houses on reserves, guaranteed by the Minister.
Band Administered Housing Programs	Band Councils may, by resolution, request authority to conduct their own housing programs using money provided in departmental appropriation.
Indian Off-Reserve Housing Program	An Indian who is regularly employed away from his reserve may be assisted in securing a Central Mortgage and Housing Corporation 1st Mortgage loan as well as a 2nd Mortgage loan from the Minister of Indian Affairs and Northern Development. He will be required to make a small personal contribution.

Subsidy Housing Program - Band members who are able to do so are required to make a small down-payment known as a personal contribution. Indian Chiefs and Councillors are responsible for deciding which members of the Band shall receive housing assistance from the funds available each year.

The following tabulation indicates the amounts of personal contributions required and the maximum amouhts of subsidy allowable, based upon an applicant's income and need.

Applicant's Income	Minimum Cash Payment	Maximum Subsidy
(dollars)	(dollars)	(dollars)
Less than 3,000	135	8,500
3,001 - 3,600	235	8,500
3,601 - 4,200	335	8,500
4,201 - 4,800	435	8,500
4,801 - 5,700	535	8,500
5,701 - 6,600	635	7,500
6,601 - 7,500	735	6,500
7,501 - 8,400	835	5,500
8,401 - 9,000	935	4,500
Over 9,000	1,185	3,500

When determining the personal contribution an applicant is required to make, family allowances and welfare assistance are not considered as income.

Housing Construction and Expenditures	1966-67	1967-68	1968-69
Number of houses constructed	1,769	2,005	1,794
Expenditures from appropriation	$7,996,786	$13,230,000	$13,395,000

Indian On-Reserve Housing Program - Central Mortgage and Housing Corporation Loans for Construction of Houses on Reserves) The Indian On-Reserve Housing Program provides for Central Mortgage and Housing Corporation loans under two types of circumstances:

1) to persons who do not obtain assistance under the Subsidy Housing Program but who, nevertheless, wish to borrow money for the construction of houses on Indian reserves; and
2) as supplementary assistance to persons who qualify for direct housing aid under the Subsidy Housing Program, but who wish to build more expensive houses than is possible with the basic subsidy for which they are eligible.

Fiscal Year	C. M. H. C. Loans Approved	Amount
1966-67	44*	$191,184
1967-68	32	254,784
1968-69	8	71,700

*including a special project of 41 houses at Sept-Iles, Québec

Band Administered Housing Program - The fund appropriated by Parliament for the construction of houses for Indians (Subsidy Housing Program) may by agreement be transferred to Band Councils who assume responsibility for administration of their own housing programs.

Fiscal Year	Bands Authorized to Administer Program	Amount Approved
1966-67	4	$ 819,000
1967-68	7	1,949,300
1968-69	10	8,118,800

The Indian Off-Reserve and Eskimo Re-Establishment Housing Program - Indian people may establish eligibility for forgivable mortgage loans up to a maximum of $10, 000. The amount of eligibility depends upon an applicant's salary as does the personal contribution he is required to make. A repayable first mortgage loan is secured from C. M. H. C. or an approved lender to make up the difference in the total amount required.

Fiscal Year	Applications Received	Certificates of Eligibility Issued	Forgivable Mortgage Approved
1967-68	251	150	96
1968-69	188	161	129

Expenditures and net commitments for the same period are tabulated as follows:

Expenditures	1967-68	$ 443,416
"	1968-69	721,148
Outstanding Commitments, March 31, 1969		272,703
Total		$1,447,267

Water and Sanitation Services - The Department endeavoured to ensure that there was a source of potable water on all Indian reserves and assisted as well as encouraged the Indian people to improve their sanitation facilities. In many cases where existing supplies of water in Indian communities were inadequate, domestic water systems were constructed. On reserves where houses were scattered, wells were drilled or dug at strategic locations.

Water and Sanitation Services	1966-67	1967-68	1968-69
Number of houses receiving pressurized water for the first time.	492	821	596
Number of houses connected to sewer or septic tank for the first time	441	585	471
Number of houses in which indoor toilets were installed for the first time.	384	749	583
Expenditures on utilities (dollars)	1,483,000	2,425,000	2,644,000*

*Provisional

Electrification - The program of extending electrical power to all Indian reserves where economically feasible, was continued. The highest priority was given to extension of services from the existing public utility systems to Indian reserves and communities. As an alternative, generating units were installed in isolated areas where the local inhabitants were able to maintain and operate their own generating units and distribution systems.

Electrification and Capital Expenditure	1966-67	1967-68	1968-69
Number of Indian reserves receiving community electrification	75	73	52
Number of houses receiving electricity	1,569	2,808	2,775
Capital expenditure on electrification (dollars)	959,000	1,006,000	829,000*

*Provisional

Road Systems - An amount of $3,002,000 was spent during the year on construction of new roads and the reconstruction of existing roads on Indian reserves, and access roads connecting reserves with non-Indian communities. Provision of roads is an essential means of overcoming the isolation of many reserves, thus facilitating the movement of people between Indian and non-Indian communities; of permitting Indian children to participate in off-reserve school programs; and of giving Indian adults access to centres of employment and marketing. Where roads were of direct benefit to both Indian and non-Indian communities, cost-sharing arrangements with municipalities or provinces were arranged.

As in cities, the road needs of towns and rural municipalities are not only constantly changing, but existing roads require maintenance and reconstruction depending upon traffic flow. A number of Roads Needs Studies were conducted by departmental staff and consulting engineers.

There are approximately 4,000 miles of roads of all types on Indian reserves in use today. Approximately 215 miles of new and reconstructed roads were built during 1968-69.

Expenditures on roads and bridges are set out in the following tabulation:

Expenditures - Roads and Bridges	1966-67 (dollars)	1967-68 (dollars)	1968-69 (dollars)
Maintenance	729,000	634,000	1,081,000
Construction	2,451,000	2,614,000	2,824,000

Band Management Support

Trusts, Funds and Treaty Obligations - Total Indian Band funds held in consolidated revenue as of March 31, 1969, are capital $26,149,966.67, and revenue $5,562,891.94. At the close of the fiscal year the receipts to Band funds amounted to $10,779,585.39 and expenditures totalled $10,758,163.67. The main items of receipts to the fund were from government interest $1,595,498.71, oil revenue $4,278,795.50, and leasing $2,713,734.54.

Some of the major items of expenditures were housing, $1,897,256.93, Band enterprises $1,099,651.44, cash disbursements $1,482,386.71, and roads, bridges and sidewalks $875,851.13.

Two hundred and twenty-eight Bands managed their own revenue funds under Section 68 of the Act, in whole or in part.

At the close of the year there was a $431,001.10 deposit in Indian savings for 1,941 Indians.

Treaty annuity payments totalling $623,677 were distributed to 110,397 Indians in accordance with the various treaties. The Government of Ontario refund of $39,224 was paid under Treaty No. 9.

Grants to Bands - A total of 384 Grants were issued in the fiscal year 1968-69, to 200 Bands, thus making it possible for the participating Bands to operate and administer their own programs.

The total expenditure under the Grants to Bands Programs was $4,847,686.69 broken down as follows:

Program Grants	$3,548,440.81
Administration Grants	959,237.94
Recreation Grants	319,053.94
Library Grants	20,954.00

The foregoing figures represent an increase of 85 Bands participating in the program and an expenditure of $4, 357, 319. 69 over the previous fiscal year.

One hundred and ninety-six Band elections were held in accordance with the Indian Act. Two Bands formally adopted the elective system for the first time. Forty-seven by-laws were passed by Indian Band Councils and seven referanda were held involving liquor privileges.

EDUCATION

As a result of the increasing participation of the Indian communities in school administration and the growing enrolment of Indian children in provincial schools, the Education Services Directorate continues to assume to a greater degree, the rôle of consultant. During the year,there were numerous meetings with Indian representatives and with provincial education officials to plan a program of education that is consistent with the existing needs of Indian students.

The declining need of institutional care, an indication of improved economic conditions on the reserves, is revealed in the decreased enrolment in the student residences, several of which will shortly be closed.

One of the major advances in 1968 was the increase in Indian representation on provincial school boards, made possible by broadened school legislation in Ontario, New Brunswick, British Columbia,and Saskatchewan.

The operation of federal schools continued to decline in line with the transfer of federal schools to the provincial system and the increasing enrolments in provincial schools.

An important change in the administration of the former federal residential schools was accomplished during the year: classroom operation was separated from the residences, and major changes were made in staffing the residences to improve the child-care function of these institutions.

School Attendance - As of January 1969, there were 62,834* Indian children attending school in kindergarten to Grade XIII, 29,483 of whom were enrolled in federal schools, and 33,351 were in provincial schools. Enrolment in the federal schools was as follows: Kindergarten, 4,363; Grades I to VI, 21,845; Grades VII to IX, 2,896.

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*Exclusive of Indian children living in municipalities

There is a steady decline in the enrolment in the federal schools after Grade V, when the majority of the Indian pupils transfer to provincial schools.

The Branch operated 299 schools comprising 1,188 classrooms. See the following tabulation for distribution by province.

Region	No. of Schools	No. of Classrooms
Maritimes	13	51
Quebec	23	124
Ontario	83	276
Manitoba	43	228
Saskatchewan	52	173
Alberta	28	160
British Columbia	57	176
Totals	299	1,188

Federal School Construction - Federal school facilities are still required in those locations where arrangements for joint education for Indian children have not been made. During 1968-69, the federal school construction program covered 75 new projects including 57 classrooms, 5 kindergartens, 3 gymnasia and 41 staff units. In addition, the Branch continued its efforts to improve existing federal school facilities by renovating buildings, installing fire-protection systems and providing improved water service and electrical systems. This work included 35 such improvement projects. The cost of the federal school construction program was $4,560,275.

Pupil Transportation - Daily transportation was provided where necessary to enable Indian children to attend provincial schools and centralized federal schools. This purchased service was made possible through agreements with provincial school boards and through contracts with individuals or transportation firms. The Branch has been encouraging Indians to participate in providing this service. During 1968-69, a total of 567 contracts for transportation were entered into at a cost of about $3 million. Forty-six per cent of the contracts were with persons of Indian status. Fourteen Indian Bands took advantage of a new Departmental Grants-to-Bands program to finance transportation services for their children at a cost of approximately $300, 000.

Professional Training and Development - More training opportunities in Canadian universities for teachers of Indian children continue to become available. Special trans-cultural education courses were offered at the Universities of Alberta, Saskatchewan, and at the University of British Columbia through its Extension Department.

Indian women from the communities where kindergartens were opeating were selected as teacher-aides to assist kindergarten teachers. These teacher-aides were enrolled in summer school programs offered at the Universities of Manitoba and Saskatchewan. Teachers and teacher-aides were trained together as teams and wherever possible were placed in the same school. In the schools, the teacher-aides acted as assistants to the teachers in many ways, particularly in relating to the community and to students who spoke little or no English when they first came into the class.

Difficulty in recruiting qualified education staff in a number of specialized fields makes it imperative that provision be made to enable existing staff members to become qualified in these fields. Educational leave with allowances equivalent to half salary was granted to a number of employees who wished to take courses in kindergarten or primary education, counselling, adult education, language arts, elementary mathematics, or librarianship. Provision was also made for educational leave for certain senior staff members who wished to follow graduate courses in supervision and educational administration. The newly inaugurated summer school assistance program is governed by the same priorities as educational leave. Preference in selection of candidates for the summer school assistance program is given to those who have already embarked upon a two or three-year program to obtain a specialist certificate in kindergarten, guidance or other priority fields.

Other forms of training based on organizational need consist of pre-service training and in-service training including workshops, institutes, and conferences organized at the regional and district levels.

Research - The research program of the Education Directorate is carried out in co-operation with the universities, departments of education, and other agencies. Studies have been concentrated largely in four areas: early pre-school experiences, language instruction, relationship between education programs and employment, and community-school relations.

Vocational Education and Adult Education - There was a considerable increase in the number of Indians who were assisted through the three major post-school activities of adult education, vocational training, and employment and relocation as indicated in the following tabulation.

Categories of Education	1967-68	1968-69
Adult Education		
Basic Literacy	2,224	3,415
Other Adult Programs	6,833	9,652
Total	9,057	13,067
Vocational Training		
Pre-vocational	598	1,443
Vocational Skills	1,029	1,393
Technology	274	364
University	180	235
Teacher Training	27	38
Nursing	18	20
Other	180	340
Total	2,306	3,833
Employment Relocation		
Short term	8,135	8,676
Regular	3,206	3,460
In Service Training	144	330
On-the-job Training	95	257
Family Relocations	287	509

Program Highlights

The training allowance schedule was revised to conform with the schedule used by the Department of Manpower and Immigration.

A training on-the-job program within the Federal Public Service was initiated.

A pilot labor force survey was conducted in the Northwest Territories; this survey will be extended to the region.

A service contract was negotiated with the Extension Division of the University of Saskatchewan to provide counselling assistance to families who relocate to Saskatoon.

A successful one-year-on-reserve carpentry program involving several agencies was carried out successfully in the Maritimes.

A service contract was negotiated in Saskatchewan to train native women as homemaking instructors. On completion of training these women organize courses in their home communities.

Co-operation was extended to the Department of Manpower and Immigration in a comprehensive study of the migration and adjustment of indigenous workers and their families.

A special training program was introduced within the Department to train Indian keypunch operators for employment opportunities in government and industry.

All families remaining in the Elliot Lake pilot relocation project have now moved on to other centres for employment or advanced training. Facilities at Elliot Lake will continue to be used for relocation purposes as part of the on-going program.

A two-year contract was negotiated with the Toronto YMCA to provide a program of social orientation and skill development for young Indian women to prepare them for vocational training and employment.

Adult education programs were conducted in 250 Indian communities.

Widespread local involvement in adult education programs was effected through the formation of adult education committees.

Reports from British Columbia indicated increased involvement of Public School Adult Education Directors in the development of adult education programs for Indians through the purchase of services.

Special training programs for Indian leaders were conducted on an experimental basis in Manitoba.

Guidance and Special Services

Pupil Accommodation - Student residences enroll students who are unable to commute to federal day schools or provincial schools from their homes.

The following tabulation shows the enrolment in student residences, classified by denomination and by province or territory, January 1969.

Denominational Auspices	Student Residences								Enrolment		
	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon	Total	Boys	Girls	Total
Anglican Church	2	4	1	2	2	2	1	14	1,116	1,095	2, 211
Presbyterian		1	1					2	126	124	250
Roman Catholic	4	4	6	7	8	9	1	39	2,518	2,538	5, 056
United Church			2		1	1		4	315	277	592
Federal Government Hostel							1	1	42	55	97
Total	6	9	10	9	11	12	3	60	4117	4089	8, 206*

*Includes 4, 094 resident school boarders attending non-federal schools.

Requirements for admission to student residences were revised and students admitted must now come within one of the following categories.

Home is isolated and removed from day school services

Parents or guardians are migratory

Serious problems in the home

The handicapped student who has a chronic condition, but can live in a student residence and obtain regular medical follow-up which would be difficult to obtain in the home area.

Students who require a period of adjustment to urban living through living in a residence with peers who share his culture - that is, a student who requires a gradual orientation to urban living before he can manage in a private boarding home in the community.

No suitable private boarding home is available in the area in which the appropriate school is located.

The Department arranged for twelve child-care workers to attend a year-long course in child care at Mount Royal Junior College in Calgary. Subsequently, graduates from this course were placed in student residences.

During the year, approximately 3,700 students were placed in private boarding homes. The majority of the students were 16 years of age or older and most were high school students. The purpose of the boarding home program is to provide a satisfactory living environment for students who must leave their homes in order to continue their education. Students in private boarding homes may be provided an educational allowance, according to need, upon application.

Because of the expansion in the numbers of boarding home students, a study of the boarding home program was conducted in 1968 to examine its effectiveness and to make proposals for improvement.

Scholarships - In addition to the financial assistance given to students at the secondary and post-secondary levels the Department, each year, awards scholarships for university, teacher training, nursing, cultural activities and vocational training. These scholarships are made available largely as incentives to promising students to continue their education. During the year a total of 53 scholarships and awards were provided - 11 university scholarships, 4 teacher training scholarships, 11 cultural scholarships, 4 nursing scholarships, and 23 vocational training achievement awards.

Estates

Estates of deceased or mentally incompetent Indians are processed by the Administrator of Estates. During the fiscal year, the administration of 937 estates was concluded and 808 were opened. Administration also managed the assets of 672 mentally incompetent Indians and 411 Indian infants.

Vouchers, totalling 2,881, were processed in receipt of $349,247.78 for credit of estates and in disbursement of $483,434.77 in payment of debts and distribution to heirs. A balance of $581,044.85 in money and securities was held on behalf of infants, mentally incompetent adults, and in the estates of deceased Indians.

Police and other reports of fatal accidents were reviewed in approximately 65 cases. Appropriate action was taken where third party liability was indicated.

DEPARTMENTAL ADMINISTRATION

DEPARTMENTAL SECRETARIAT

In addition to acting as the co-ordinating agency for a number of central service operations, the Secretariat also compiles and co-ordinates replies to parliamentary questions, parliamentary returns, and any correspondence that affects more than one directorate.

The Secretariat is responsible for the Department's accommodation in Ottawa, for administrative support services, for the departmental Library and for the Northern Co-ordination Division. In the Department's system of corporate management, the Secretariat is a vital link between the committees through which much of the management of the Department is cleared and co-ordinated.

The Department continued its efforts to ensure that its organization reflects the needs of the communities and interests served. To further this aim, the various groups serving Indian and Eskimo programs were brought together so as to provide the broadest support for field programs and, at the same time, enhance the expertise available.

As needs change, the Department's organizational structure will adapt to new conditions and circumstances. Following the announcement of the Government's Indian Policy proposals, an Indian Consultation and Negotiation Group was formed. The object of this group is to ensure that Indian views are taken fully into account in the formulation of policy and the administration of programs.

MANAGEMENT

During the fiscal year, the Management Services Division began a series of manpower utilization studies that will ultimately cover all major activity centres within the Department. The program has been phased over a two-year period, and is to be completed by March 1970.

To date, nineteen major studies have been completed involving four study teams operating in the field and two in Headquarters. Identified potential savings by the end of the fiscal year exceeded 400 man-years and planning for the fiscal year 1969-70 was broadened to include implementation teams that will assist managers in carrying out recommendations affecting their operations.

A further benefit of these studies will be the establishment of work and quality standards so as to provide a sound basis for management to assess manpower requirements by function.

Internal Audit

With the exception of some for northern sites, regular audits of internal control at most responsibility centres were completed during the year. Systematic follow-up on observations raised by auditors eliminated most of the common faults in financial or asset control encountered in departmental field administration. Greater audit emphasis will henceforth be placed on the areas where any weaknesses are discovered.

Program Analysis and Management Accounting

Increased emphasis was placed on the analytical requirements of Program Forecasts and Departmental Estimates as an essential part of management information needs. The financial management reporting system was further adjusted to this end.

Program Analysis and Management Accounting staff co-ordinated the preparation of estimates for both "blue book" presentation,and in the new format under the revised program-activity structure.

An advisory service in financial planning and administration to functional managers was also made available throughout the fiscal year.

Manpower Budgeting

A number of adjustments were made in manpower management. The manpower freeze, the forecast of need for man-year utilization reports to the Treasury Board, the addition of capital, and repair and upkeep man-years to the Department's establishment, closer relationships between man-year and dollar requirements, and re-organization of the Department, imposed on unanticipated workload on manpower budgeting. The emphasis throughout the year was, therefore, on operational adjustments rather than policy development.

Computer Services

This year, the first full fiscal year of operation at approved staff levels for the Computer Information Systems Division, was marked by the consolidation and expansion of existing systems and the addition of a number of new systems.

A selected list of statistical and management reporting systems developed during the fiscal year is set out in the following paragraphs.

The Migratory Bird Permit System was expanded to include the automatic selection and analysis of 40,000 questionnaires for the Species Composition Survey.

The Mining Model was modified to include analysis of smelter operations and was used on a number of occasions at the request of the Resource and Economic Development Group.

A study of a Hydrological Model of a Northern Watershed was undertaken and a report produced.

A system to store and analyse information on residues of pesticides in selected samples was developed. Work began on statistical analyses and classification of measurements of polar bears.

A material management control system was developed and programmed for implementation in April, 1969.

Keypunch Training Centre

In September 1968, the Division in conjunction with the Indian Affairs Branch - developed a keypunch training centre for Indian girls. As the initial results were very encouraging it was decided to continue the operation of the centre. The original group of six girls graduated in January 1969.

Central Statistics

The Central Statistics Division was formed in March 1968. It consists of: eight senior analysts, each with a specific responsibility for one or more activities within the programs of the Department; and an Operation Section, responsible for liaison with the field, administration, scientific support and the Departmental Statistical Information Centre.

Biometric services were supplied to the Canadian Wildlife Service, and in the area of planning, statistical advice to the National and Historic Parks Branch. Statistical services to the Conservation program were in the process of being expanded to cover other Branch activities.

The main concentration of services to the Indian and Eskimo Affairs program was in the field of education, and in Eskimo labour-force surveys. Indian education-data flows were improved through the use of computers. Labour-force surveys for the Northwest Territories will be carried out in Baffin Island and in the balance of the Northwest Territories. These surveys represent a continuation of those carried out in the Keewatin Region and parts of the Lower Great Slave Lake area. Better over-all statistics in the Indian program were sought through the use of a "Band Profile" which is designed to provide management with standardized and comparable statistics. Emphasis was placed on analyses of demographic data in liaison with the Dominion Bureau of Statistics, Census Division.

In the Northern Development program, plans were completed to provide consulting services in the development of a management information system for, and at the request of, the Northwest Territories Government.

Regular contact was maintained with other federal departments in all relevant fields particularly with the Dominion Bureau of Statistics, and with provincial governments, to ensure standardization of information.

LEGAL ADVISER

The Legal Adviser is the general counsel of the Department. He and his professional staff are called upon to advise on a wide variety of matters. These relate in the main to the activities of the Conservation, Developement and Social Affairs programs of the Department, and include such matters as national parks, historic sites, migratory birds and other wildlife, the various aspects of Indian and Eskimo Affairs, and the Northwest Territories and Yukon Territory. Some matters, such as those to which the Claims Regulations apply, are required by law to be referred to the Legal Adviser. Many other matters are the subject of consultation.

The Legal Adviser advised the Deputy Minister, Assistant Deputy Ministers and senior officers on the legal implications of departmental policy and legislation. In some cases, he drafted legislation before it was discussed in detail with the Department of Justice. In matters which result in or which involve actions in the courts, the Legal Adviser is the liaison officer between this Department and the Department of Justice.

During the fiscal year 1968-69, questions relating to the liability and to the rights of the Crown were a recurrent topic. Leases, contracts, permits, and licences were drafted almost daily in the Legal Adviser's office, as were submissions to the Governor in Council and the Treasury Board, orders in council, regulations and amendments to regulations. As in previous years the Legal Adviser's office was also engaged in the preparation of opinions on the interpretation of the statutes and regulations administered by this Department and the application of other statutes and of the common law to departmental activities.

The commissioners of the Northwest Territories and the Yukon Territory administer the government of the Territories under instructions given them by the Governor in Council or the Minister of this Department, and the legal Adviser was called upon for advice during the year by the Deputy Minister and Assistant Deputy Ministers in connection with the government of the territories.

The Legal Adviser co-operates with the commissioners on the uniformity of legislation in Canada on behalf of both Territories and, as in previous years, the work of the commissioners was assessed at the annual conference of the Canadian Bar Association. In 1968, this conference took place in Vancouver, and the Legal Adviser attended.

PERSONNEL

The Office of the Personnel Adviser provides departmental management with the expertise and advice required for optimum utilization of human resources. Advice to senior management on policy decisions affecting personnel matters, and functional assistance to Branch Personnel Advisers

is offered by specialists in all areas of personnel administration. The various Divisions which constitute the Personnel Adviser's Office include Manpower Planning, staffing, Staff Development and Training, Classification and Compensation, and Staff Relations.

Manpower Planning

Work on manpower planning continued so as to develop and refine the tools essential to the effective utilization of the Department's manpower.

The computer file now carries basic data, such as name, education, experience, classification salary on over 5200 full-time employees. This data is reflected in the form of an employee print-out which was mailed at two different times (July and December 1968), to be brought up to date by the employee. Response was good and the changes were coded back into the employee file on the computer. This was the first annual updating from 1969-70 on, the updates will incorporate the newly developed inventory of skills. A partial file was created on computer for approximately one third of the operational staff and work in this area is continuing.

The regular issue of reports from both the master establishment files and employee files continued throughout the fiscal year. Some special reports were produced to answer inquiries from outside agencies.

The Departmental Manpower Inventory was extended by the development of a detailed skills inventory intended to supplement the data currently available on employees on the Department. The terminology and procedures for obtaining this inventory were developed and then tested by a pilot project group of 83 employees across the Department. Revisions were made and, in January 1969, an initial mailing was sent to approximately 3, 800 full-time employees. Work on obtaining this additional information was in progress at the end of the fiscal year. Coincident with the gathering of data, a selection cycle was developed by means of the expanded inventory.

A review-in-depth of the Employee Evaluation Program was conducted parallel to the extension of the inventory. This program was introduced across the Department in 1966. The purpose of this review was to analyze

the progress towards, and the roadblocks preventing, the full attainment of the Program's objectives. A committee made up of members representing the Department, studied the current status of the program and, in September 1968, produced a report recommending changes primarily in procedures and mechanics rather than in the philosophy and objectives of the program. The approved recommendations were in effect by the end of the fiscal year. The more important changes included integration of probation evaluation with the regular program, amalgamation of three forms into one, more flexible scheduling, and a general streamlining of the process.

The Manpower Planning and Staffing Section was involved in the absorption of 1, 500 hostel employees into the Department during the fiscal year; assisted in the training programs; and co-ordinated the drafting of regulations concerning the status of those hostel employees, who were temporarily exempted from the application of the Public Service Employment Act and Regulations.

Staffing

The authorized establishment as of March 31, 1969 is shown in the following tabulation:

Arrangement	Classified		Teachers		Prevailing-Rate Positions		Other Seasonal, Part Time		Totals
Establishment	Ottawa	Field	Ottawa	Field	Ottawa	Field	Ottawa	Field	Totals
Departmental Administration	521	29	-	-	-	-	15		565
Northern Economic Development	100	89	-	-	-	10	-	43	242
Canadian Wildlife Service	52	142	-	-	-	-	-	2	196
National & Historic Parks	216	774	-	-	1	470	26	1, 488	2, 975
Social Affairs	342	1, 455	16	2, 112	2	208	7	15	4, 157
Development Operations	214	465	7	-	2	282	-	7	977
Totals	1, 445	2, 954	23	2, 112	5	970	48	1, 555	9, 112

The grand total of 9,112 positions represents an increase of 220, due mainly to expansion of the services to the Indian and Eskimo population. During the year there were 1,160 appointments to the classified staff and 652 separations. The Figure on page 150 shows the growth of the Department from March 31, 1958 to March 31, 1969.

In the fall of 1967, the first contingent of territorial employees moved to Yellowknife, the new capital of the Northwest Territories. They were accompanied by nine federal public servants who had been granted leave of absence from the Department to serve the Territorial Government in its formative years. During the past year, the majority of Mackenzie positions were transferred to the Territorial Government. Policies and procedures were developed to handle the staff who became surplus as the phased transfer of administration of programs and services from the Federal Government to the Territorial Government took place. Twenty-seven such surplus members of the staff were placed in alternate positions. Only one person was laid-off. Most of the Mackenzie employees went to the Territorial Government on two years leave of absence without pay so as to help stabilize operations during this transitional period.

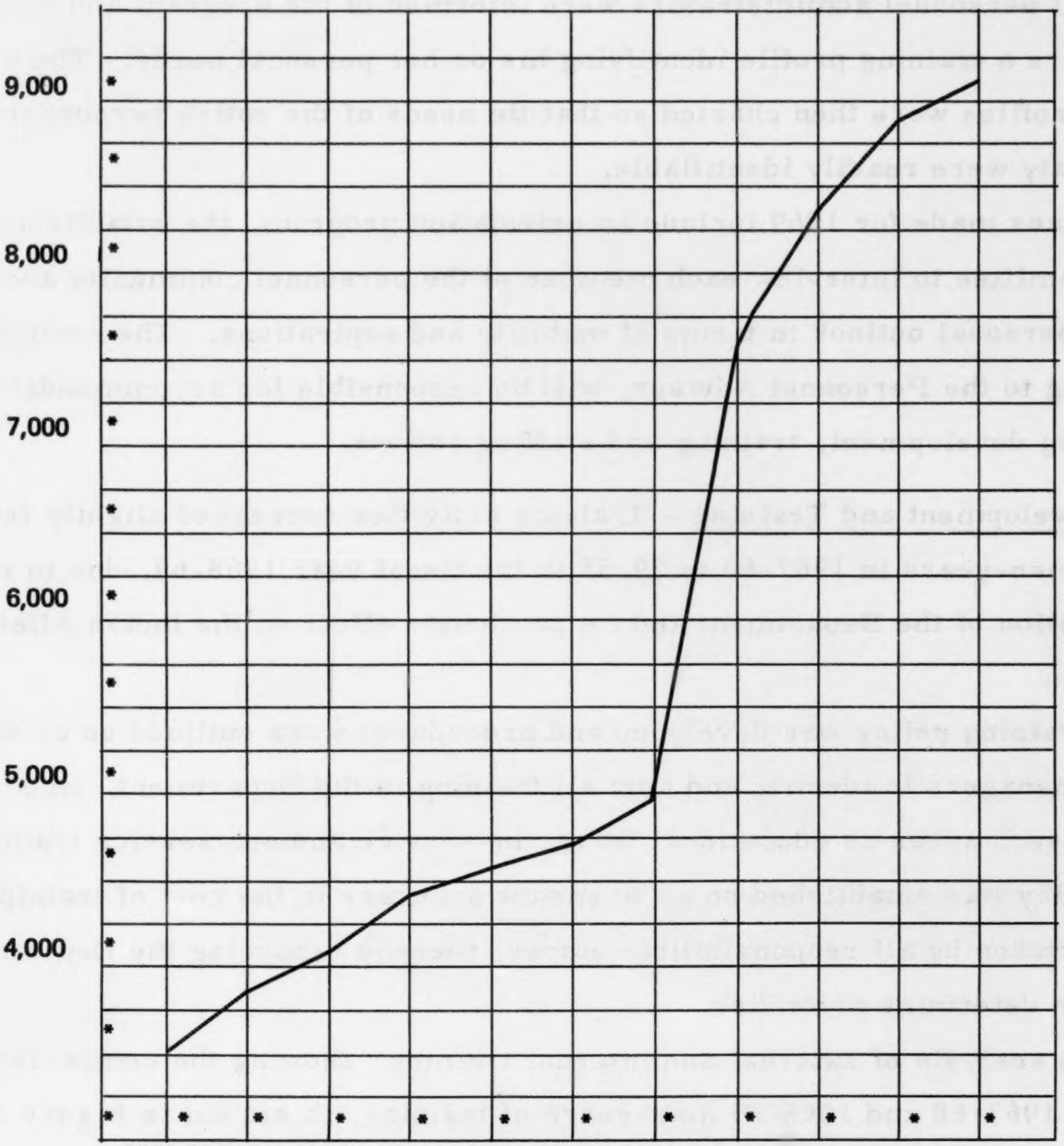
During the fiscal year, the Public Service Commission decided to delegate, to the maximum practical degree, its powers, functions and duties under the Public Service Employment Act. Before delegation could occur, the Public Service Commission has to describe generally the terms and conditions under which Deputy Heads could carry out their own staffing. This the Commission has done, or is doing, by establishing selection standards for each category and group.

The Department has already accepted delegation in the Operational and Administrative Support Categories and will be accepting delegation for the Administrative and Foreign Service Category in the near future.

Personnel Administrator Development Program - Early in 1968, the Personnel Administrator Development Program was launched. The over-all objective of

Personnel

Figure 1 — Growth of the Department of Indian Affairs and Northern Development (1958-1969)



3,300 positions added by advent of Indian Affairs Branch in 1966.
The above figures represent authorized establishment as at March 31 of each fiscal year.

the program was to increase the effectiveness of personnel administrators by identifying training needs and providing opportunity for development of personnel staff to meet the needs of the Department.

All personnel administrators were informed of the program and asked to prepare a training profile identifying his or her personal needs. The completed profiles were then charted so that the needs of the entire personnel community were readily identifiable.

Plans made for 1969 include an orientation program, the establishment of a committee to interview each member of the personnel community and to record personal outlook in terms of mobility and aspirations. The committee, reporting to the Personnel Adviser, will be responsible for recommendations regarding development, training and staffing actions.

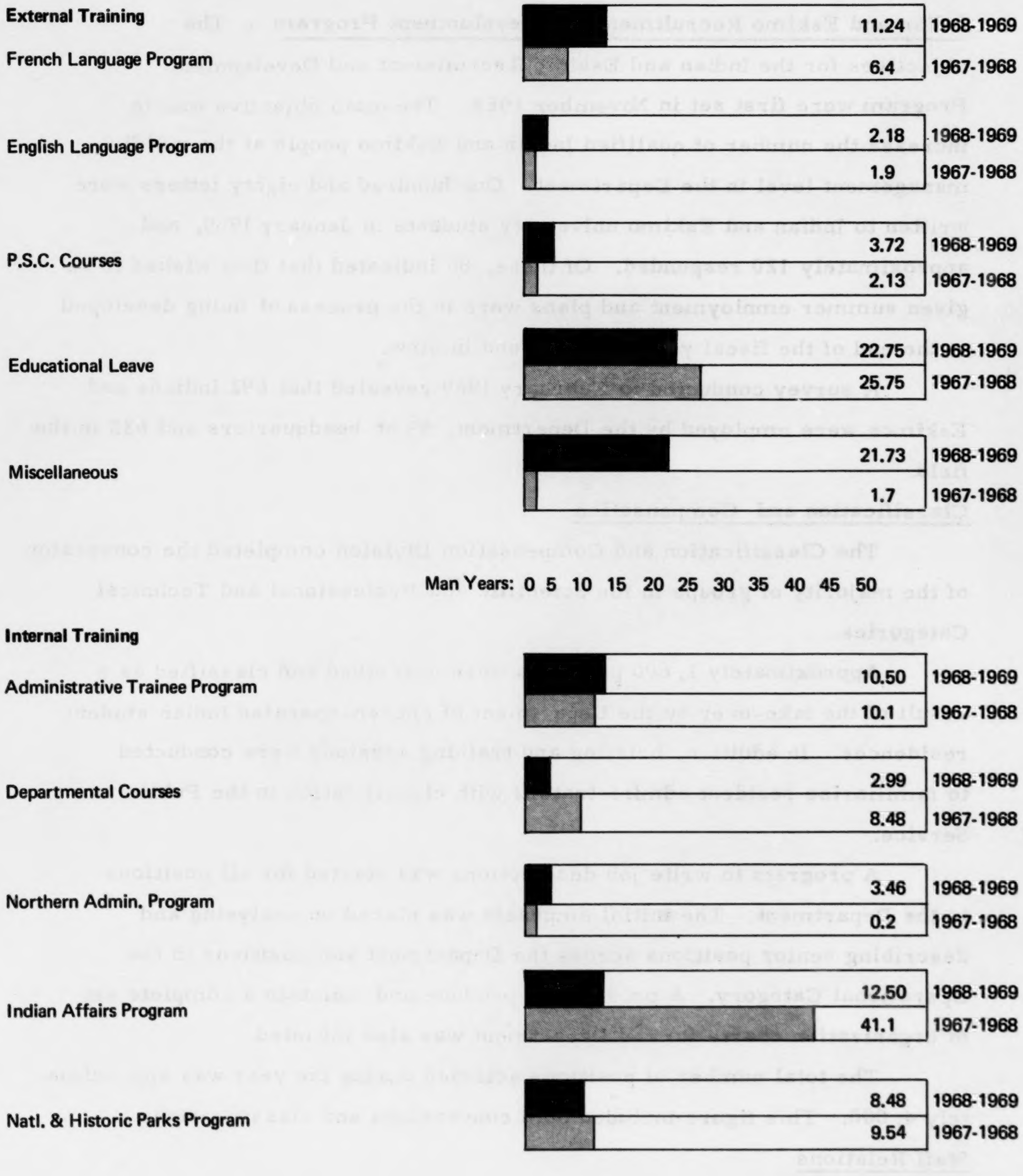
Staff Development and Training - Training activities decreased slightly from 107. 30 man-years in 1967-68 to 99. 55 in the fiscal year 1968-69, due to reorganization of the Department and its particular effect on the Indian Affairs Program.

Training policy was developed and procedures were outlined so as to enable managers to identify and cost all training in the Department, encompassing such areas as educational leave, in-service and out-service training. This policy was established so as to ensure accuracy in the cost of training to be undertaken by all responsibility centres, thereby enhancing the Department's ability to determine priorities.

An analysis of external and internal training, showing the comparison between 1967-68 and 1968-69 man-years of training, is set out in Figure 2.

The Public Service Commission continued its language training support for instruction in English and French. The total attendance at the French language program was 80. It is anticipated that as a result of expanded Public Service Commission language facilities, this number will be increased at an accelerating rate in the coming years.

Figure 2 – Man Years of Training, 1967-1968 and 1968-1969



		1967-1968	1968-1969
Man Years: Summary:		107.30	99.55
	External Training	37.88	61.62
	Internal Training	69.42	37.93

Indian and Eskimo Recruitment and Development Program - The objectives for the Indian and Eskimo Recruitment and Development Program were first set in November 1968. The main objective was to increase the number of qualified Indian and Eskimo people at the middle management level in the Department. One hundred and eighty letters were written to Indian and Eskimo university students in January 1969, and approximately 120 responded. Of these, 85 indicated that they wished to be given summer employment and plans were in the process of being developed at the end of the fiscal year with that end in view.

A survey conducted in February 1969 revealed that 692 Indians and Eskimos were employed by the Department, 59 at headquarters and 633 in the field.

Classification and Compensation

The Classification and Compensation Division completed the conversion of the majority of groups in the Scientific and Professional and Technical Categories.

Approximately 1, 600 positions were described and classified as a result of the take-over by the Department of church-operated Indian student residences. In addition, briefing and training sessions were conducted to familiarize resident administrators with classification in the Public Service.

A program to write job descriptions was started for all positions in the Department. The initial emphasis was placed on analysing and describing senior positions across the Department and positions in the Operational Category. A program to produce and maintain a complete set of organization charts for the Department was also initiated.

The total number of positions actioned during the year was approximately 4, 000. This figure included both conversions and classifications.

Staff Relations

Immediately after the first collective agreements affecting Public Service employees were signed early in 1968, the Staff Relations Division began to conduct training seminars to familiarize managers with contract administration. Training sessions were held at Ottawa, in the eastern and western regions and in the Northwest Territories. Approximately 450 managers attended the collective bargaining seminars. At the end of 1968-69, 19 collective agreements were in force.

The Department continued its assistance in negotiating the first Agreement for the Education Group, assuming responsibility for gathering data and statistical material on education from the private sector. The Staff Relations Division played a significant part in the take-over of student residences from the various religious organizations.

The Staff Relations Division continued to act in an advisory capacity to all Branches in dealing with grievances, appeals and disciplinary matters.

A monthly newsletter, "Management Communiqué," was introduced in April 1968. Its distribution to all managers in the Department will improve the communication process necessary to keep management aware of developments in staff relations.

Renewed efforts were made to promote the Incentive Award Plan, consisting of Suggestion Award, Merit Award, Outstanding Achievement Award, and Long-Service Award Plans, so as to stimulate employee interest and effectiveness on the job. Suggestion awards totalling $1,525 were paid out, resulting in a potential saving to the Department of $29,762.50 and intangible benefits which would effectively increase efficiency in departmental operations. Five officers of the Department received awards totalling $3,500. under the more recently implemented Federal Government Merit Award Plan. Merit awards are granted for service "beyond the call of duty". A Suggestion Award Participation Contest was conducted and results were very gratifying - the total number of suggestions received during the first month of the contest was equivalent to what would have been expected during a six-month period.

The co-ordinator of the Suggestion Award Program travelled to Louisbourg, Nova Scotia, to present and publicize an award of $810. to two employees at this location. Coverage of this presentation on local television and in the Department's magazine "Intercom," focussed attention on field employees' participation.

A series of long-service award presentations began in 1968-69 and 103 employees received awards for 25 years or more in the Public Service.

Accident Control

In August 1968, Treasury Board introduced its Occupational Safety Policy for the Public Service. The purpose of the policy is to provide departments with directives to undertake and maintain active safety programs appropriate to their operations. Departmental safety directives were introduced, specifying the minimum required safety activities that are to be implemented. Program central safety committees have been established to assist operating managers in the maintenance of adequate safety activities in accordance with the Treasury Board directive.

Supervisory safety training was conducted in the eastern and western Parks regions and in the Northwest Territories throughout the fiscal year. All employees of the labour force at Banff, Jasper and Louisbourg attended one-hour safety sessions. The theme of these special sessions was "Knowing's Not Enough."

To provide a foundation for a safety program, training seminars were conducted at Fort Smith, Yellowknife and Inuvik in the Territories.

Two Gold Cap Awards were presented to employees who had saved themselves from serious or fatal head injuries by wearing hard hats. One Wise Owl Award was given to an employee who, by wearing safety glasses, prevented a serious eye injury.

PROGRAM MANAGEMENT EVALUATION

The Directorate of Program Management Evaluation assists the Deputy Minister in judging the effectiveness of departmental programs and, more particularly, the Department's performance in reaching program objectives. The Directorate is staffed by a small specialist group of professionally trained personnel operating out of Headquarters under the direct authority of the Deputy Minister. It is responsible for maintaining a constant review of the entire scope of the Department's operations in the field, the regions, and at headquarters. In its role as a senior staff organization, it assists managers at all levels to resolve problems. It also provides them with advice and make recommendations to improve the managerial decision-making processes and plans for future operations.

During the 1968-69 fiscal year, the Directorate carried out a number of reviews of the Department's field and regional operations and submitted reports to the Deputy Minister and senior management in the Department. Based on the observations and recommendations of the Directorate, management decisions were taken to improve operations in various areas of the Department. In addition, the Directorate carried out special studies and tasks on behalf of the Deputy Minister concerning the implementation of further reorganization of the Department.

TECHNICAL SERVICES

The Technical Services Branch was formed by consolidating the Engineering Divisions of three former Branches and by the inclusion of the Materiel Management Division.

The Branch provides departmental program managers with a complete co-ordinated engineering, architectural and material service with supporting design, construction and maintenance, material management and safety policies, procedures and standards and extends the service to regional directors through engineering staff in the field.

The Branch is responsible for the execution of major capital projects included in the Department's programs; for the provision of technical assistance to program managers in developing programs and budgets for program forecasts; for the development and promulgation of design, construction and maintenance, materiel management and safety policies, procedures standards based on research; for initiating evaluation techniques and for the inventory and evaluation of capital assets; and for the provision of capital management information to meet the needs of program officers and senior management officers.